

SEPTEMBER 21, 1935

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Railway Age

FOUNDED IN 1856



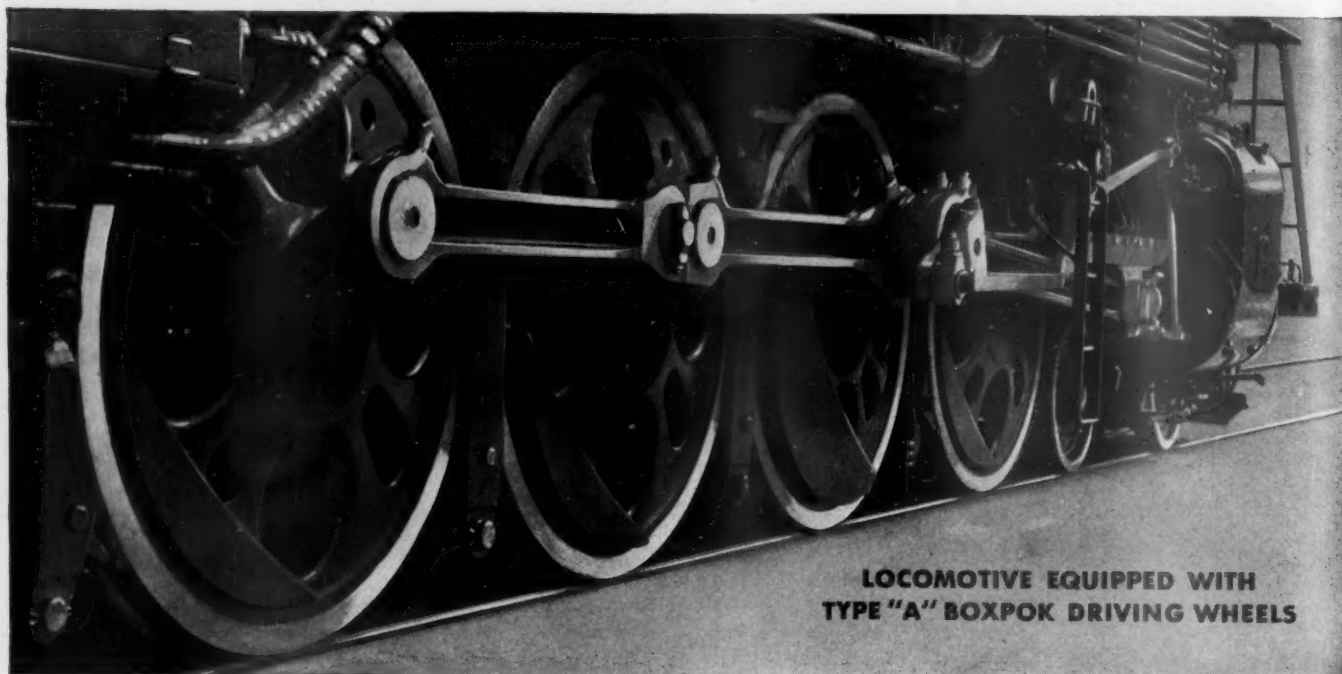
The Rise of Passenger Traffic . . .

THE definite gains that have been made in passenger travel by the railways as a whole, are indeed encouraging. But the outstanding results achieved by a number of trains of unconventional design such as the Union Pacific's Diesel-electric streamlined units, the Milwaukee's Hiawatha, the Burlington's Zephyrs, and others, are a challenge which transcends in importance a thinly spread general increase.

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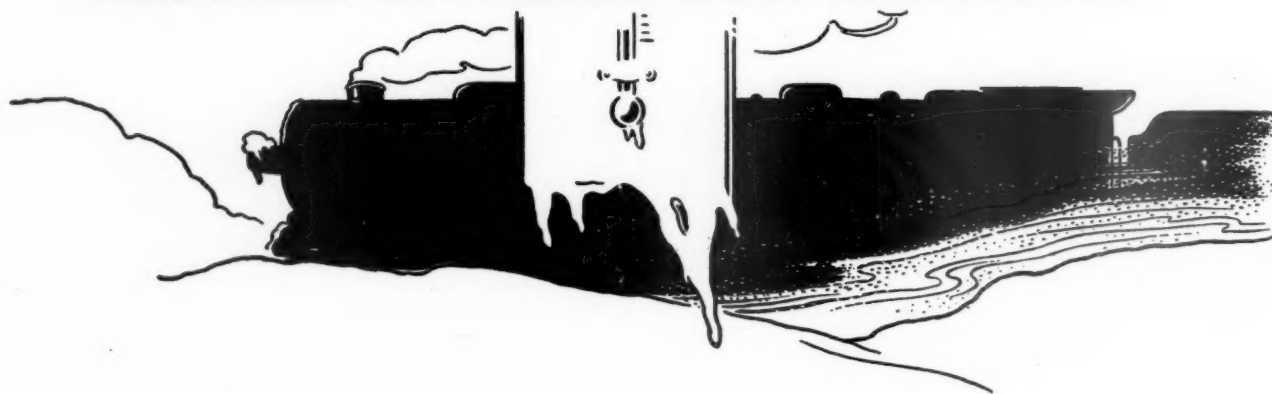
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RAILWAY AGE

Why Business Leadership Loses Ground to Socialism

Aided by an outright gift of \$413,000 from the work relief fund, Iowa City, Iowa, the state's seat of learning, is about to build its own \$917,000 power plant and distribution system, duplicating the present privately-owned property. . . .

When—and if, because there are many similar cases pending in the courts of the country now—the project is completed, a year hence, the private companies will face extermination. . . .
Thomas W. Phelps in the Wall Street Journal.

This is truly a sample of an economics of ruin—not only of the investment of private capital in the existing power plant, but of the national wealth as well. The national wealth, measured in income, is the sum total of goods and services distributed among the entire population. If capital is to be used to duplicate existing facilities which are adequate, rather than to increase production and reduce production costs, then this nation will cease to increase in wealth—and we will become progressively poorer as the use of existing invested capital ceases.

The people are tempted into approval of such anti-social folly by an appeal to their cupidity. The federal government pays 45 per cent of the cost of the new plant. If it be assumed that the municipal plant will be operated as efficiently as the existing one, then rates to consumers can obviously be made lower than those now charged, although the total true cost of production of power may not be altered at all. The dishonesty of such a policy and the folly of it from the standpoint of the national income are so patent that it ought not to be difficult to awaken the citizens of the country to its dangers.

Organizing to Protect All Investors

But even most of those who are most active in sounding the alarm against present governmental policies toward the utilities have seemed to overlook the fact that the same policies have long dominated government treatment of transportation; and that the government money which has been wastefully used to compete with private investment in transportation is a veritable mountain by comparison with which the competition of government funds with private investment in the

power business, so far at any rate, is less even than a mole hill.

Not that we believe the present policies toward the power industry should for that reason be condoned. Far from it. We hope and believe that not only the industry itself, but every citizen jealous of the integrity of his own business as well, will insist that these policies be abandoned. But will not business as a whole—and the power business in particular—make a much stronger case if it will defend a principle rather than merely complain against a particular grievance?

The power industry itself seems to think so. The American Federation of Utility Investors made a great fight against unfair and confiscatory utility legislation during the recent session of Congress, although the methods used by some utility companies were indefensible. Dr. Hugh Magill, president of this organization, announced this week that it is being reorganized under the name of American Federation of Investors to battle against socialistic policies in general and “for a fair deal for honest investors in all American industries.” Such an organization of investors in all industries is needed, and with intelligent and energetic leadership and adequate support from all industries in behalf of all investors it could render a great public service. No other industry and its investors need the service it could render so much as the railroads and investors in them, because, in addition to the harm done them by the unequal regulation applied to them and their competitors, the railroads are by far the greatest of all sufferers from government subsidized competition.

Socialistic Competition with Railways

The Mississippi Valley Committee of the Public Works Administration included no representative of the railroads. It was strictly a government committee. It submitted its report to Secretary of the Interior Ickes, as Administrator of Public Works, on October 1, 1934. It found that to the end of 1932 the United

States had spent about \$1,500,000,000 on river and harbor improvements chargeable to navigation alone. An additional \$117,000,000 was expended in 1933. Of the amount spent to the end of 1932 about \$440,000,000 was chargeable to navigation on the Mississippi River and its tributaries.

The committee concluded that "the total government subsidy provided shippers by water (on the Mississippi River below Cairo) would be, at the time of completion of the work now under construction, * * * when reduced to a basis comparable to expenditures for rail haulage, approximately 9 mills per ton-mile." The average revenue per ton-mile in 1933 of the Illinois Central and the Missouri Pacific, the railways most closely paralleling the lower Mississippi, was less than 9½ mills per ton-mile. In other words, the shippers using the lower Mississippi received a subsidy from the taxpayers almost equal to the total amount they would have had to pay the railroads for the same amount of transportation. The Mississippi Valley Committee ascertained that "private carriers—largely coal and steel companies—now transport more than 95 per cent of the total commerce on the Ohio River," and that the subsidy received from the taxpayers by the shippers using that river was 5 mills per ton-mile. "The costs here shown," said the committee, "do not include costs of operating the boats, nor handling the freight, but are Federal costs only, no part of which is paid by users of the waterway." The committee showed that the subsidies received by shippers using practically all other inland waterways are larger per ton per-mile than those received by users of the lower Mississippi and the Ohio.

Huge Subsidies to Railway Competitors Continue

Of the Missouri River improvement—which it estimated would cost \$250,000,000—the committee said, "Assuming that the more optimistic estimates of future traffic will be realized, the savings to shippers which would result from free operation of the waterway would exceed by only a small margin the annual charge to be borne by the public for maintenance and interest on the investment." As to the upper Mississippi improvement it said, "It is not possible by any calculations of business accounting to discover an economic justification for the vast expenditures." The Beaver-Mahoning project is for the purpose of assuring a 9-foot navigable channel from the Ohio River to Struthers, Ohio. On the basis of the estimated annual traffic, the shippers using it would receive from the taxpayers a subsidy of 11 mills per ton-mile. "The principal direct beneficiaries," said the Mississippi Valley Committee, "would be about six or eight large steel mills and an equal number of other heavy manufacturing or utility interests."

In view of these estimates and statements by the government's own committee, it is interesting to consider recent appropriations and allotments for expenditures upon waterways. The Rivers and Harbors bill recently passed by Congress provided for future ex-

penditures of \$614,000,000, and allotments made for the current year amounted—until recently, at least—to \$112,200,000. There was made an allotment of \$25,000,000 for the Missouri, including construction of the reservoir at Fort Peck, Montana. There was an allotment of \$25,000,000 for the upper Mississippi. There was an allotment of \$5,000,000 for the Beaver-Mahoning project. There was an allotment of \$5,000,000 for enlargement of the present New York barge canal, the greatest white elephant in the history of waterways. There was an allotment of \$5,000,000 for the preliminary construction work on a sea-level ship canal across Florida which the army engineers estimate will cost a total of approximately \$146,000,000.

It might be added that to June 30, 1934, federal appropriations alone for highway purposes had been \$2,309,000,000, and that federal highway allotments to the states for this year are \$200,000,000.

Business Interests and the Railways

Why should business interests make a great fuss about the government subsidizing competition with utilities and other industries, and hardly any fuss at all about its past and continuing much huger and more wasteful subsidizing of competition with the railways? Are they actually opposed to government competition with private investment and industry—or only opposed to government competition with all industries excepting the railways? The Mississippi Valley Committee called attention to the fact that 95 per cent of the Ohio River subsidies go to large coal and steel companies, and that practically all of the Beaver-Mahoning canal subsidies would go to "six or eight steel mills and an equal number of other heavy manufacturing or utility interests." Do even the utilities agree, when they are on the receiving end, that subsidies are more blessed to receive than to give? *In just what kind of a position do large business interests that avow undying opposition to socialistic policies, insane government spending and unbalanced government budgets believe it puts them to have it demonstrated to the public that they have been and still are the principal promoters and beneficiaries of some of the most socialistic and insane spending of the taxpayers' money that has been and is still being done?*

The problem of equalizing terms of competition in transportation is not merely one of regulation. It is also one of government competition and government subsidies. Nobody can give any sounder reason why any kind of transportation should be subsidized than why any other kind of business should be subsidized.

It is wrong in principle so to spend government money for subsidies that the prices charged by the beneficiaries of the subsidies do not reflect real costs. The wrong, from the standpoint of society as a whole, lies in the fact that prices thus made artificially low deflect purchases from goods and services which are actually cheaper to those which are actually more costly. Subsidized power appears to cost less than it actually does and the public is tempted to use more

than it can afford, deflecting its purchasing power from other goods and services which would offer better bargains if the facts were known. Subsidies distort the flow of the productive energies of society from the satisfaction of keener wants to those which are less acute. They reduce the national wealth and the national income. That is why they are wrong from a social standpoint, and that ought to be the reason prompting business of all kinds to unite in opposing them.

Opposition Should Be Based on Principle

If opposition is to be based, not upon this principle, but rather is restricted only to the complaints of individual businesses at the time when the violation of the principle happens to hurt them most, then—it can be safely predicted—the opposition is not going to be very effective.

And that is precisely why opposition on the part of business men to socialistic policies of government has made no greater headway than it has against the rising tide of socialism. The expenditure of billions of dollars of government money to make highway and water-

way transportation appear cheaper than it actually is leaves many self-styled champions of private initiative who happen to profit immediately by such expenditures in a very complacent frame of mind. They do not really object to socialism; they favor it where it is to their selfish advantage.

What they do not realize, apparently, is that if the federal government can spend money competing with private business to their advantage, it can also—and will in due course—use tax money to compete with their businesses as well. That is the socialist strategy: Ruin the railroads by tax-fostered competition, with the plaudits of the road builders and canal contractors and motor vehicle manufacturers (they can be socialized in due course later on). Ruin the utilities next (of course, short-sighted business men will help with that, too, tempted by lower rates for power). The socialists, at least, are consistent. They know what they want, and they are working for it day and night. No wonder they make progress when they pick their victims one by one, and when those not immediately under attack do nothing to oppose their advance, but even cheer them on.

Hope Revived for Grade Crossing Work

Hopes have been revived for a widespread effective grade crossing elimination and protection program with the \$200,000,000 earmarked specifically for this purpose in the administration's \$4,000,000,000 relief measure, by the amendment of the rules and regulations approved to govern this class of work, as described in the *Railway Age* of September 14, page 340. Under this amendment, the sections of the rules and regulations which have delayed and threatened to block hundreds of the most desirable projects, and to defeat not only the universal desire for the removal of many crossings but also the very underlying purpose of the expenditure itself—employment of those on the relief rolls—have been removed.

These specific sections of the regulations, incidentally, did not originate with the Bureau of Public Roads, which, from the beginning, has shown a practical understanding of the problem and a keen desire to see large-scale effective work carried out.

One of the rules revoked, section 6, established a \$1400-per-man-per-year limit for labor, materials and all other items, or the alternative requirement that 40 per cent of the expenditure for a project must go to persons directly employed on the project in the field operations. So, likewise, have been revoked the alternative plan for the utilization of federal grade crossing funds (section 22), calling for state participation, and the 90-per cent relief-roll labor requirement.

The high labor-materials ratio specified in the original rules and regulations was designed to stimulate the greatest employment of labor, and the 90 per cent

requirement was designed to insure work relief for those on relief rolls, but both failed of their purpose through their severity. Furthermore, the original requirements gave no consideration to the man-hours employed away from the site of the project, and ignored the fact that to stimulate the employment of labor in industry through the increased production of materials, supplies, and equipment for grade separation and protection projects was just as effective in creating man-hours of work as insisting upon hand operations in the field.

Grade separation and protection provide one of the most beneficial and generally popular classes of work for which public funds can be expended; also, their benefits can be spread rapidly over the entire country. Furthermore, there will be the assurance that the work is in the hands of competent engineers who will make each dollar yield its full return in results.

Plans have been prepared and submitted for thousands of projects, which await approval. Hundreds more can be brought to this stage in a few weeks. If the Administration is really in earnest about stimulating employment which will reach all parts of the country, into all relief rolls, and into numerous industries, it will apply grease to the wheels of its grade crossing program, now that the brakes have been removed, and will release speedily hundreds of the projects which are in its hands for approval. The railways, at the same time, which have already extended such prompt and generous co-operation, should spare no effort to get this work actually under way.



Cars Loaded with Scrap Ready for Shipment

Milwaukee Opens System Plant for Dismantling Equipment



Preliminary Stages in Dismantling Cars and Dumping Bodies in Burning Yard

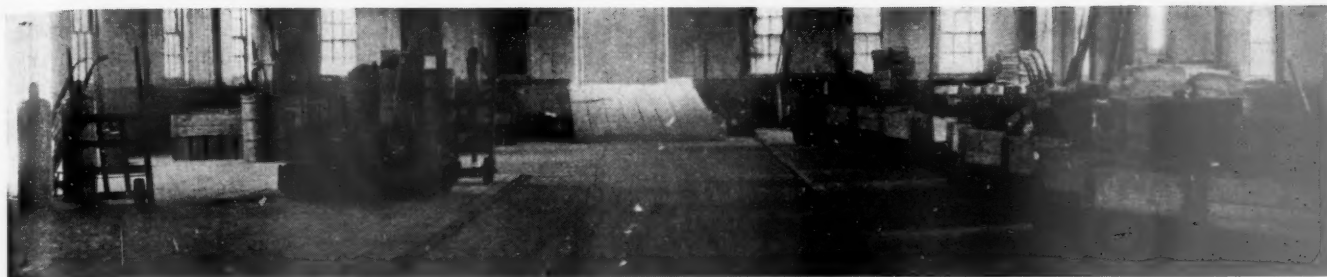
Scrapping of 3,000 cars and 400 locomotives gives employment and paves way for new rolling stock—Scrap-handling highly organized

Part I

SINCE last October, the Chicago, Milwaukee, St. Paul & Pacific has been carrying on a large car and locomotive dismantling operation at Dubuque, Iowa, where 150 machinists, boiler workers, car men and other employees who had been idle for three years are now engaged on a reasonably permanent basis, in destroying cars and locomotives sent there from all points on the railroad. Under this program, 8,537 freight, work and passenger cars and 421 locomotives were authorized to be dismantled in 1934 and 1935, and it is anticipated that approximately 2,500 cars will be handled in the same manner annually during the next five years. Thus far, 3,500 cars and 121 locomotives have been dismantled at the plant at the present rate of 32 cars and 1 or more locomotives per day.

The work includes the sorting and loading of the scrap, much of which does not touch the ground. The Dubuque operation is a new approach to the problem of disposing of old equipment on this road and, while limited at present to dismantling, promises to become one of the largest enterprises of the kind in the country, when reclamation work in prospect is included.

This is the last step in a program which has been under consideration since 1931 and has had as its objective the orderly retirement of freight cars which have become obsolete or which can no longer be maintained economically. As early as 1928, a study was made of every type of car owned by the company and, with the aid of cost records, schedules were prepared which prescribe a limit on the amount of money which may be



Incoming Supplies and Outgoing Salvage are Largely Shipped, Stored and Handled in Skids

expended to continue each car in service and which provide that when this allotment is exceeded or when it will be exceeded in repairing any of the cars in question, that car will be withdrawn from revenue service. The Dubuque shop was selected as a place reasonably close to the scrap market where the work could be carried on without interfering with other work and without requiring extensive additions or rearrangements of tracks and facilities, and also where the dismantling could be performed effectively to make work for former employees. While situated on a secondary line, the Dubuque facilities are within a few miles of a junction with two main lines and are also at a point where it is necessary to maintain switch engines for other purposes. There are also no fire or other regulations of the local government which interfere with the dismantling work.

The facilities used for dismantling lie between the main tracks and the bank of the Mississippi river, and consist of an old tank repair shop, 75 ft. wide and 170 ft. long, containing 9 tracks; an old coach shop of the same size, containing 10 tracks; a transfer table serving these two shops and 20 or more tracks, one set of 10 tracks running parallel to the main line where they were once laid to serve the shops, and the remaining tracks following the river bank where they were once laid for storing cars. The land between the two sets of tracks was cleared of old sheds; crossovers were installed in the dismantling tracks, and a new building was constructed for generating acetylene and distributing oxygen and acetylene to outlets installed throughout the yard.

This plant, one of the largest in use on a railroad, consists of a brick and concrete building 26 ft. wide and 50 ft. long, with one room containing two oxygen manifolds, each holding 20 cylinders for a combined production of 30,000 cu. ft. of oxygen per day under 35-lb. pressure, a second room for storing carbide, and the third containing three acetylene generators holding 300 lb. of carbide each. This building has a concrete floor,

metal doors, a corrugated steel roof, vapor-proof lights, ventilators in the room and at floor level, and steel window sash, and has a shipping platform car-floor high on one side.

The facilities include trays for collecting and shipping material, while power units for handling material have been provided as follows: One self-propelled, revolving, gas-operated crane, equipped with a 35-ft. boom and magnet and one revolving steam crane with a 40-ft. boom for dismantling locomotives; one steam crane with a 50-ft. boom and magnet for dumping freight cars and loading car scrap; one Yale & Towne high-lift truck of 5 tons' capacity for handling underframes; one Burro crane with high wheels and high-speed propulsion and a generator for loading cut underframes; one Elwell-Parker electric crane truck for loading dismantled trucks; and one low-lift electric truck for moving trays and performing miscellaneous work in the dismantling shop or storehouse. A steam wrecking crane is also available, when desired, for use in the locomotive dismantling yard for loading uncut boilers or performing other heavy work, and apparatus has been installed for removing tires from wheel centers and recovering the lead in the counterbalances of wheel centers.

The program for 1935 provides for the retirement of 2,185 freight cars, as follows:

Series	Average age	Owned of type to be dismantled	Ordered retired	Construction
Automobile	24	1,019	210	Steel underframe
Ballast	22	606	65	Steel underframe
Box	25	14,158	1,060	Steel underframe
Caboose	35	833	10	Steel center sill
Flat	26	2,690	305	Wood and steel
Gondola	25	2,756	375	Steel underframe
Ore	24	574	80	Wood
Stock	29	322	40	Wood and steel
Hopper	22	114	40	All-steel
Totals		23,072	2,185	

When cars of these series require repair work and it is found that the estimated repairs exceed the maximum man-hour expenditure allowable per car, they are set



Cutting and Loading Scrap from Burned Car Bodies—Ground Cleared Each Day



Thirty-two Cars are Burned Each Day

aside for dismantling and are forwarded to Dubuque as called for. The trucks under the cars vary from arch-bar types to T-side frames and U-side frames, and, since the box cars are principally of the double-sheathed type with nails closely spaced, they are burned, except for a few bodies which are switched to a spur track as requested by employees desiring to strip them for kindling wood and except, also, for a few additional bodies which are laid aside for sale to local buyers.

Box cars are brought into the burning yard each night by switch engines and spotted in blocks of eight cars each on the three tracks next to the burning yard, where six cutters with oxycetylene torches cut the bodies loose from the underframes and one cutter separates the metal roofs, which are saved. The locomotive crane, moving under its own power, switches eight cars at a time to the track next to the burning yard and then from the adjacent track, tips the cars, one at a time, into the burning field, and rolls them over until 16 cars are ready for burning. Two laborers work with the crane in this operation.

Having completed this operation by noon, the cars are ignited and burn until about 2:30 p. m., when the remaining 16 cars are dumped in the same place and ignited after the yard work has stopped for the day. On the following morning, the place where these cars were burned is sufficiently cool to enable the crew to devote the day to cutting and loading the scrap iron from the car bodies, the practice being to use one end of the burning field for burning cars one day and the other end the next day, so that crews can be employed continuously in cutting up the scrap iron and in burning the equipment.

The scrap iron is reduced to No. 1 melting steel, or in sizes not to exceed 18 in. in width and 5 ft. in length, by a crew consisting of 10 regular cutters, who are assisted by the seven other cutters when the latter are not cutting the bodies of cars from the underframes. Ten laborers



A Mallet Locomotive in the Locomotive Dismantling Yard

gather the cut scrap into piles ready for loading into gondola cars. The crane uses a magnet in this operation and moves the loaded cars to a point from which they can be switched out of the yard at night. During the same night, the frames on their own trucks are switched to a track accessible to the dismantling shops.

(To be concluded in a later issue.)

Morgan & Co. to Sell Van Sweringen Collateral

J. P. MORGAN & CO. and affiliated banking houses have announced their intention of selling at public auction on September 30 at New York a block of securities pledged with them as collateral security for loans of \$41,600,000, now totaling with unpaid interest more than \$50,000,000, made to the Cleveland Terminal Building Company and the Vaness Company, which companies are controlled by O. P. and M. J. Van Sweringen of Cleveland.

Among the securities to be disposed of at the sale are over 2,000,000 shares of common stock, or approximately 50 per cent of the total, of the Alleghany Corporation, which corporation controls the Chesapeake Corporation, and which latter in turn dominates the Chesapeake & Ohio. The Alleghany Corporation also has working control of the Missouri Pacific System and the Denver & Rio Grande Western, now in process of reorganization. Through the Virginia Transportation Company, investment affiliate of the Chesapeake & Ohio, and other companies—the Alleghany Corporation has a preponderant position in the Nickel Plate, the Pere Marquette, the Erie and the Chicago & Eastern Illinois.

The proposed sale involves the control not only of approximately 25,000 miles of railway with a book value of some three billion dollars, but extensive real estate holdings in Cleveland, coal mine properties and trucking, barge line and warehousing enterprises as well. The market value of the listed securities to be sold is approximately \$7,500,000, exclusive of those the value of which is problematical. Following the announcement by the banking interests of the proposed sale, the following statement was issued on the behalf of the Messrs. Van Sweringen:

"In answer to inquiries at the Van Sweringen offices, it was announced that the public sale of collateral securing notes of the Cleveland Terminal Building Company and the Vaness Company, held by a New York banking group, is with the consent of the debtor companies, Messrs. O. P. and M. J. Van Sweringen and their associates have completed arrangements to bid for the collateral at the sale and have also arranged for new capital to carry on the enterprises."

Sale of the securities, if they bring no more than current market prices, would entail a loss to the bankers of more than \$40,000,000. The bankers, however, are unwilling apparently to assume further responsibility with regard to the financial requirements of the properties, control of which, by reason of the defaulted loans, is actually, if not technically, in their hands.

The statement in behalf of the Van Sweringen interests would appear to indicate that new banking arrangements have been made, and strongly implies the possibility that control of the properties may continue in their hands following the auction sale. The source of the new capital which will be associated with the Van Sweringen interests in their bidding for the securities to be auctioned has not been disclosed.

Part of One of the Larger Section Gangs on the Wichita Valley Railway



Fewer Foremen and More Men— Solves Branch-Line Problem

Larger gangs with longer sections, plus track patrolmen, result
in greater output of work per man employed

By J. D. Farrington

General Manager, Fort Worth & Denver City and Wichita Valley Railways, Fort Worth, Texas

SINCE 1931, one of the most difficult problems confronting railroads that serve the more sparsely settled agricultural territories is that of the branch line. Branch lines, on the whole, have suffered more severely than main lines, from the development of new and competitive forms of transportation as well as from the depression, with the result that the loss of both passenger and freight business has been proportionately greater. Construction in the rural districts, other than road building, has practically ceased. The improved highways and the universal use of the automobile and the light truck have wiped out many of the local merchants in the smaller communities and effected a centralization of merchandise markets in the larger communities. These influences have also brought about the almost complete elimination of local passenger train travel.

Ordinarily, the branch line of the type in mind has been served in the past by a daily local freight in each direction and one or possibly two passenger trains, with the operation of occasional extra freight trains as conditions required, especially during the crop-moving season. In many cases slow service and an indirect route have placed the branch line at a disadvantage which it has been unable to meet since the advent of the hard road and the motor truck, so that the existence of the line is dependent largely upon the handling of a certain portion of the carload business moving into the communities and on outgoing traffic in the form of agricultural, mineral, livestock or lumber products which the territory may produce. This movement is more or less seasonal, so that the line may be of great value to the communities during certain periods, while during other periods it may be little used, and is therefore far from self-supporting.

The branch-line mileage of many of our large central and southwestern systems is a very considerable portion of their total mileage, and the expenditures for maintenance and transportation are, therefore, also a very

considerable portion of the total expenditures. The question of service regulation is ordinarily rather easy to meet, possibly the best and most economical solution being the mixed train. But the problem of roadway maintenance is a more difficult one.

Ordinarily, with a rapid decline of business, the branch lines of the larger systems are the first to feel the effect of a curtailment of maintenance expenditures. While there has been some tendency to extend the length of sections, generally the working force is reduced, frequently to a foreman and one or two men, and during certain periods to the foreman alone. It is generally admitted that where section forces are reduced to a foreman alone or to a foreman and one man, little actual work is accomplished, and certainly no progress is made toward improvement.

In the past, these periods of slack business have been comparatively short, and as the volume increased the normal force was restored, so that no serious damage was done. What has occurred during the last three years certainly needs no explanation or description here, but in-so-far as it concerns the branch line it has been a case of an almost uninterrupted decline in revenues, and this imposes the pertinent question as to how much further it is possible to continue the curtailment of maintenance expenditures without encroaching on the bounds of safety. This was the problem that confronted us in 1932, and which led to a complete change in our method of branch line maintenance in August of that year.

While the system of branch-line maintenance which is described below has been in effect generally for more than two years on all of the branches of the Burlington's Texas lines, I have selected the lines of the Wichita Valley Railway for discussion here because of the wide range of conditions represented. They include lines carrying a light and medium volume of traffic; the rail ranges from 56 lb. to 85 lb.; some lines are ballasted and others are not; there are all types of subgrade con-

ditions; the lines have reached an age where the tie renewals are comparatively heavy; and at the time of the establishment of the new organization the physical condition was such as to require definite improvement. The results from the initial experiment on these lines have clearly demonstrated the possibilities of building up a line with a minimum force. They cannot be considered as merely an effort to carry on with a line that was in good physical condition.

The Typical Organization

The old organization was similar to that commonly provided for branch lines. The total mileage, 269, was divided into 27 sections of approximately 10 miles each. Our force varied from a foreman alone during short periods to a foreman and two or three men per section during the working season. On an average, it was much like a South American army—principally generals and very few privates. The foremen patrolled their tracks, took care of the innumerable odd jobs that everyone feels at liberty to call on the foremen to do, and with the time they had left they picked up a few joints and made a few tie renewals, with the result that, on the whole, the condition of the line was progressively deteriorating. An analysis showed that we had 27 foremen at a rate of pay practically double that of our track laborers, or in other words, the expense of 27 foremen was about equivalent to 54 laborers.

Our attention was first focused on the line from Wichita Falls, Tex., to Abilene, 151 miles in length, which might be called the main line of this branch-line district. There were 16 sections, including a yard section at Wichita Falls and 15 road sections. We decided to divide the road mileage into four sections, averaging about 37½ miles each. Each section was provided with a small outfit consisting of a combination foreman's and kitchen car, one bunk car, and one tool and supply car. To each of these sections was assigned a patrolman with experience as a track man, who was paid a rate equivalent to that of assistant foreman. He was provided with a light inspection car, a small jack, and other tools. His duties required him to patrol his section daily, inspecting switches, track, bridges, culverts, etc., taking care of small jobs and correcting any track conditions requiring immediate attention, and reporting conditions daily to his foreman.

This relieved the foreman and the gang of all track patrolling and all work of a miscellaneous nature, and left them generally free to carry on constructive maintenance work each day. This plan provided far better patrol and inspection than is ordinarily provided on branch lines.

As this arrangement eliminated 11 foremen, the wages previously paid to them could be devoted to other uses, and after absorbing the expense of the 4 patrolmen, there remained about \$1,000 per month that could be expended for additional labor, or the equivalent of 20 men. As the former plan provided an average of 2 laborers per section or about 30 in all, the new plan provided a total force of 50 laborers, to be divided among 4 gangs. This appeared somewhat excessive, and a force averaging 8 laborers to each section was established.

Remarkable Improvement in Performance

The program to be followed by each gang during the working season was prepared by the roadmaster and scheduled for each foreman for the entire season. The results were astonishing. In 2½ years, more than 60 per cent of the entire mileage was given a light surface, tie renewals were completed, and in spite of the fact that still further reductions in force were made, the line was greatly improved. During the winter months it has

been possible to curtail the forces, so that the total labor expenditures for the new organization are running less than 50 per cent of what they were under the old organization, and we are satisfied that our standard of branch-line maintenance has been improved. The results were so successful that this method has been extended to all of the other lines of the Wichita Valley, the 47 sections being reduced to 8. In some cases sections are not equipped with outfit cars, but where they are in use they are moved from time to time to convenient locations, thus eliminating, in so far as possible, the loss of time incurred in going to and from work each day. It is our opinion that this new method of maintenance is the answer to the branch-line problem, and that it has contributed measurably to our ability to keep our heads above water.

Freight Car Loading

WASHINGTON, D. C.

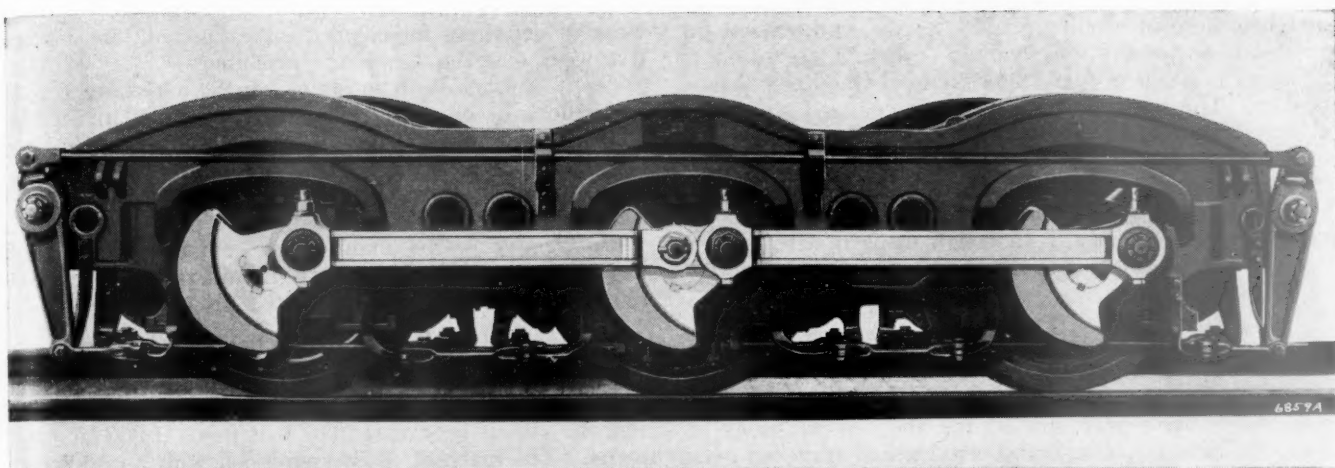
REVENUE freight car loading in the week ended September 7, which included the Labor Day holiday, totaled 592,786 cars, a decrease of 87,075 cars as compared with the preceding week, but an increase of 28,903 cars as compared with the corresponding week of last year and of 14,853 cars as compared with 1933. All commodity classifications except livestock showed increases over last year's figures and livestock and coke showed increases as compared with the week before. The summary, as compiled by the Car Service Division of the Association of American Railroads, follows:

Revenue Freight Car Loading			
For Week Ended Saturday, September 7			
Districts	1935	1934	1933
Eastern	117,447	114,047	124,890
Allegheny	107,384	101,040	117,654
Pocahontas	43,289	37,696	41,534
Southern	85,854	77,319	75,970
Northwestern	99,617	88,059	86,394
Central Western	91,556	93,236	86,332
Southwestern	47,639	52,486	45,159
Total Western Districts.....	238,812	233,781	217,885
Total All Roads.....	592,786	563,883	577,933
Commodities			
Grain and Grain Products.....	36,650	31,933	26,888
Live Stock	14,950	35,850	18,812
Coal	110,756	101,089	110,681
Coke	6,050	5,127	6,900
Forest Products	26,873	19,529	22,562
Ore	31,062	23,160	36,701
Merchandise L.C.L.	141,378	141,212	148,546
Miscellaneous	225,067	205,983	206,843
September 7	592,786	563,883	577,933
August 31	679,861	647,531	673,778
August 24	626,373	606,917	637,510
August 17	615,006	601,788	643,406
August 10	583,743	603,968	629,743
Cumulative Total, 36 Weeks.....	21,099,646	21,424,385	19,625,542

Car Loading in Canada

Car loadings in Canada for the week ended September 7 totaled 44,673, as against 47,679 for the corresponding week last year and 47,380 for the previous week this year, according to the compilation of the Dominion Bureau of Statistics. The Labor Day holiday was responsible for some of the decrease.

	Total Cars Loaded	Total Cars Rec'd from Connections
Total for Canada:		
September 7, 1935.....	44,673	17,666
August 31, 1935.....	47,380	18,229
August 24, 1935.....	43,847	18,034
September 8, 1934.....	47,679	17,461
Cumulative Totals for Canada:		
September 7, 1935.....	1,550,564	762,453
September 8, 1934.....	1,543,489	790,246
September 9, 1933.....	1,305,172	654,378



Bethlehem High-Speed Auxiliary Locomotive Series H as Tested on the Lehigh Valley

High-speed Auxiliary Locomotive Tested on Lehigh Valley

External and internal inspection showed practically no wear
after approximately 75,000 miles of service

IN ORDER to make available an auxiliary locomotive capable of overcoming the inherent limitations of the conventional locomotive in the lower range of speeds and which, in addition, can be used in high-speed service, an auxiliary locomotive, series H, was designed and built by the Bethlehem Steel Company, Bethlehem, Pa., and has been under test in regular service on a Lehigh Valley locomotive for the past year. A description of this auxiliary locomotive was given in the *Railway Age*, June 30, 1934.

The additional drawbar pull that can be developed by the series H auxiliary locomotive operating under a Lehigh Valley Class T-1 locomotive with a boiler pressure of 250 lb. of steam, is as follows:

Train speed m.p.h.	Series H auxiliary locomotive	Class T-1 locomotive	Per cent increase
Start	17,573	62,227	28.2
5	15,580	62,227	25.0
10	12,540	62,227	20.1
15	9,395	57,248	16.4
20	6,722	51,804	12.9
25	4,602	46,293	9.9
30	3,165	40,916	7.7

The ability of a locomotive to develop its rated drawbar pull under starting conditions decreases as the factor of adhesion decreases, as the driving-wheel diameter increases, as the stroke decreases, and as the main-rod angularity increases.

Description of Tests

The first Series H auxiliary locomotive, which was constructed for experimental purposes, was applied to Lehigh Valley locomotive No. 5101. This locomotive is of the 4-8-4 type designed for fast freight service and has 70-in. drivers and 27 in. by 30 in. cylinders.

In order to test two different types of power trans-

mission two series of tests were conducted as follows: First, with a jaw-clutch transmission, from March to July, 1934; and, second, with a steam-operated plate clutch, from November, 1934, which tests are still being continued. Owing to the shopping of the locomotive, the tender with this auxiliary locomotive has been transferred to several locomotives of the same class since the tests began.

During the first series of tests—all in regular service—this auxiliary locomotive made 26,600 miles. The performance was quite satisfactory, both in regard to operation and maintenance, as indicated on reports submitted. A summary of these reports is as follows: The locomotives to which this auxiliary locomotive have been

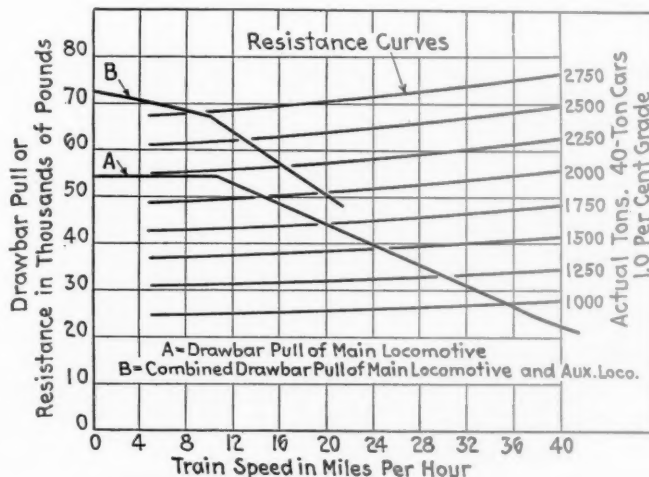


Diagram Showing Increased Drawbar Pull Provided by Bethlehem Series H Auxiliary Locomotive at Various Speeds

attached were in regular pooled service, and, except for wash-out periods, it has been in constant operation in all types of service—passenger, symbol freight, milk and pusher. The friction clutch has been engaged repeatedly at speeds varying from zero to 20 m.p.h. and operated up to 35 m.p.h. The auxiliary engine has been operated continuously for periods of 20 to 40 min. During the second test period operating results continued to be satisfactory. Recently, a thorough inspection was made by the builder in order to determine wear and condition of all parts.

External Inspection

Tires.—With the exception of a light skim cut on the tires to bring them to uniform diameter when the friction clutch drive was applied for the second series of tests, the tires on Nos. 2 and 3 axles had travelled over 65,000 miles without re-turning. Those on No. 1 axle, new at the time of the change above referred to, had travelled about 40,000 miles. While flange wear was beginning to develop, all tires should run for another 15,000 miles before turning is necessary because of flange wear on the tire of the leading axle.

This performance is attributable primarily to the reduction in un-sprung weight on the axle of this design, although credit must also be given to the fact that the tires were heat-treated.

Side Rods and Bushings.—After 65,000 miles of service the side-rod bushings did not require replacement because of wear. The material used in these bushings was in no way different from the general run of side-rod bushings. Their long life must be attributed partially to the use of pack-hardened and polished crank pins and to the fact that since the journal boxes and shoes were greased by the Alemite method they have not worn enough to give excessive play longitudinally in the vertical sliding surfaces and, therefore, do not impose excessive loads on the bushings.

Knuckle Bushings.—The knuckle bushings were made of bronze identical with those used on the standard six-wheel auxiliary locomotive and have had to be renewed once—at 26,000 miles.

Friction-Clutch Drive.—The friction-clutch mechanism after operating a full six months covering about 40,000 miles and a total registered number of engagements of about 1,650 times is still operating entirely satisfactorily. With the exception of about 1/16-in. total wear on 24 friction discs during the initial two or three weeks, this clutch showed no further appreciable wear. This

* * * *

wear is definitely indicated (not estimated) by a positive wear gage built into the machine.

Oil Consumption.—So far as can be ascertained, only six gallons of oil were added to the engine in the last 40,000 miles. The oil now used is a comparatively light oil used by railroads for car-journal lubrication. Periodic inspection of the oil gage indicated that the oil level was being properly maintained.

Maintenance.—No maintenance expense other than that of general lubrication of rods and renewal of brake shoes have been incurred since the tests began.

Internal Inspection

In June, 1935, a thorough inspection was made of the internal operating mechanism. The counter showed that the clutch gear assembly had made 1,807 engagements. The machine is also equipped with a cyclometer which records total mileage. It had travelled 71,907 miles since entering service. The pinion shaft and clutch gear assembly were in good condition. The friction discs show approximately 3/32 in. wear.

The connecting rods and bushings, as well as the cross-heads and guides, were found to be in good condition. The valve motion work showed no wear.

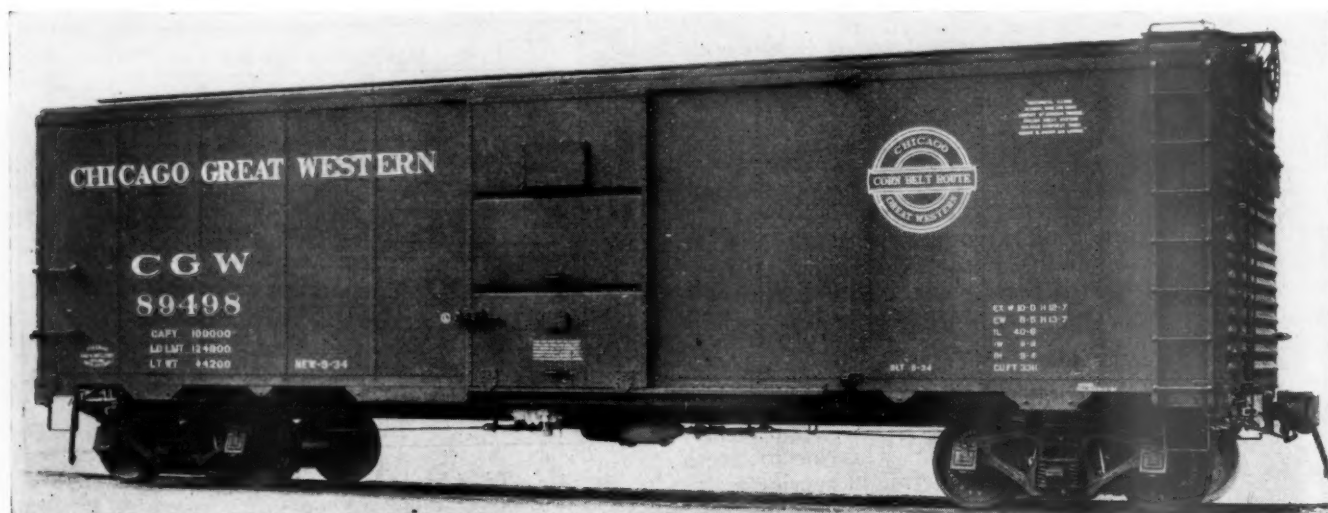
The pistons were removed and new piston rings applied because the old ones were worn. The removed piston rings had been applied on November 7, 1934. The pistons, cylinders and the side rods were also in good condition. It was not necessary to renew the side-rod bushings, although they had made 71,907 miles since being applied.

The knuckle-pin bushings were in good condition, as well as the side-rod crank arms, journal boxes and truck shoes. The tires showed 1/8 in. tread wear, although they had made 45,300 miles since they were last turned. They were not turned at this time.

The engine-bed oil was changed. The original oil removed had been applied in November, 1934, and showed little sediment. Since November 7, 1934, only seven gallons of oil had been added.

There has been no indication of heating either after long distance train operation at 60 to 70 m.p.h., or after long, slow drags.

These results are important in view of the fact that the machine was subjected to unusually severe service during the entire year. This included operation on high-speed schedules with the cutting-in and cutting-out of the auxiliary engine at higher speeds than had heretofore been considered good practice.



One of the 500 Box Cars of A. A. R. Standard Design Built for the Chicago Great Western by the Pullman-Standard Car Manufacturing Company

Factors Which Underlie Railway Traffic Revival

Low level of traffic seen caused by decline in exports and in reduced production of basic commodities rather than in diversion to competitors

By John Leeds Kerr

Railroad Economist, Young & Ottley, Inc.

Part I

WHILE the decision by Congress to regulate motor transportation will undoubtedly help to improve railway freight and traffic revenues, the traffic situation confronting the steam carriers—even prior to the enactment of this legislation—was not as hopeless as many investors believed.

The potential freight movement of the country has not yet reached its peak, although the rate of expansion has declined. As far as the present level of railway traffic is concerned, it is obvious that we have emerged from a depression and that recovery is a logical prospect. Railroad freight traffic must advance concurrently with improvement in general business before any sustained business revival is possible in the United States. Constructive readjustments are constantly occurring despite impediments which have hampered revival in industry.

Vast Changes in Nature of Production

The fundamental conditions which determine the volume of railway freight traffic have been subjected to momentous changes since 1900. The ten years which followed the World War were characterized by an impressive expansion of industry in this country which created new markets and stimulated over-production of our natural resources. The demand for gasoline resulted in a speculative development of newer and larger fields. The railroads lost their crude petroleum traffic but the movement of gasoline by rail reached the highest level on record.

New highway construction and a high level in building activity increased traffic in cement, sand and gravel. The Pacific Northwest became the chief source of lumber production which affected lumber traffic in other localities. Southern bituminous coal invaded New England and the manufacturing regions at the Great Lakes. Industrial plants were relocated, but, despite these economic changes, the railroads as an originating transportation agency were fully as indispensable in 1929 as in the pre-war days. The service performed by inland waterway carriers, motor trucks and pipe lines was—and still is—but supplementary.

It was perhaps but natural that automotive improvements and construction of new highways would bring about a demand for more rapid transportation. With the extension of paved highways it was easy and logical that highway operations should expand from local to inter-urban transportation. Railroads now have a substantial investment in motor transportation and this may serve to offset the competition of privately owned motor trucks

which have cut rather heavily into short haul traffic and which have affected, to a certain extent, long haul traffic.

Losses in passenger revenue resulted primarily from the widespread use of private automobiles. Competition with bus lines has existed largely because of the refusal of many large railroads to reduce passenger fares to a level to meet with the pocketbook of the average passenger. During the last two years Western and Southern roads, which have experimented with lower passenger fares, have reported a gratifying increase in business, which in many cases tended to reduce the operating ratio for passenger service. Almost all leading railroads have now air conditioned limited trains. Passenger equipment has been improved, train speed has increased and great strides have been made in making passengers comfortable. Without question increased passenger transportation competition from aviation lines will continue, but the outlook for passenger traffic is more encouraging than at any time during the last fifteen years.

The United States emerged from a comparatively provincial state to a high place in world commerce and finance as a result of the World War. It is obvious that the world is passing through a period of drastic economic adjustment which is affecting, and which will continue to affect, our export trade as well as our domestic business. In view of the imponderable factors in the future economic and political situation, the outcome of the depression with respect to our export markets and movement of railway traffic to supply such markets is conjectural.

Export Traffic Vital Factor

While it is difficult to concede that after a century of achievement in the development of foreign trade the trend has been permanently reversed—and our exports from now on will diminish—it is apparent that if the export business of this country does not actually retrogress, the rate of growth will at least be restricted. Economic factors affecting railway transportation have undergone a great change not only because of the export business, but owing to various developments in the domestic situation which determine railway freight volume. (See Table A.)

A sound interpretation of the competitive and regulatory problems facing the transportation industry is of vital importance in appraising the outlook for increased traffic. *The failure of railway freight movement to show any appreciable recovery, since the low point of the depression was reached, provides conclusive evidence that nothing but superficial recovery has been recorded*

EDITOR'S NOTE—Publication of this article does not necessarily imply agreement of the editors with all its conclusions.

TABLE A—Production 1900-1934

	Balance of trade (Thous.)	Volume of foreign trade (Thous.)	Wheat prod., bushels (Thous.)	Cotton prod., bales (Thous.)	Pig iron, long tons (Thous.)	Steel ingots & castings (Thous.)	Crude oil prod. (Thous.)	Bituminous coal prod. (Thous.)	Anthracite coal prod. (Thous.)	Lumber prod., bd.-ft. (Millions)	Cement, barrels (Thous.)
1900	\$648,796	\$2,307,095	602,708	10,123	13,789	10,188	63,621	212,316	57,368	34,780	17,231
1901	584,955	2,345,795	788,638	9,510	15,878	13,473	69,389	225,828	67,471	36,890	20,068
1902	391,369	2,330,002	724,808	10,631	17,821	14,947	88,767	260,217	41,373	39,280	25,753
1903	489,258	2,480,247	663,923	9,851	18,009	14,535	100,461	282,749	74,607	34,900	29,899
1904	415,409	2,487,227	596,911	13,438	16,497	13,860	117,081	278,660	73,156	34,135	31,675
1905	447,846	2,806,135	726,819	10,575	22,992	20,024	134,717	315,063	77,659	30,503	40,102
1906	477,741	3,118,745	756,775	13,274	25,307	23,398	126,494	342,875	71,282	37,551	51,000
1907	500,256	3,346,596	637,981	11,107	25,781	23,362	166,095	394,759	85,604	40,256	52,230
1908	636,461	2,869,209	644,656	13,242	15,936	14,023	178,527	332,574	83,269	33,224	52,910
1909	252,677	3,203,719	700,434	10,005	25,795	23,955	183,171	379,744	81,070	44,510	66,689
1910	303,354	3,429,163	635,121	11,609	27,304	26,095	209,557	417,111	84,485	40,018	77,785
1911	560,167	3,624,885	621,338	15,693	23,650	23,676	220,449	405,907	90,464	37,003	79,547
1912	581,144	4,217,291	730,267	13,703	29,727	31,251	222,935	450,105	84,362	39,158	85,925
1913	691,421	4,276,614	763,380	14,156	30,966	31,301	248,446	478,435	91,525	38,387	92,949
1914	324,348	3,902,900	891,017	16,135	23,332	23,513	265,763	422,704	90,822	37,346	89,049
1915	1,776,074	5,333,267	1,025,801	11,192	29,916	32,151	281,104	442,624	88,995	37,012	86,708
1916	3,091,005	7,874,276	636,318	11,450	39,043	42,774	300,767	502,520	87,578	39,807	132,363
1917	3,281,045	9,185,980	636,655	11,302	38,185	45,061	335,316	551,790	99,612	35,831	93,453
1918	3,117,875	9,180,299	921,438	12,041	38,506	44,462	355,921	579,385	98,826	31,890	71,514
1919	4,016,061	11,936,846	967,979	11,421	30,582	34,671	378,367	465,860	88,092	34,552	86,141
1920	2,949,535	13,506,497	833,027	13,440	36,415	42,133	442,929	568,667	89,598	33,799	97,079
1921	1,975,883	6,994,178	814,905	7,954	16,544	19,784	472,183	415,922	90,473	26,961	96,046
1922	719,030	6,944,524	867,598	9,762	26,880	35,603	557,531	422,268	54,683	31,569	118,590
1923	375,427	7,959,559	785,741	10,081	40,059	44,943	732,407	564,564	93,339	37,166	137,183
1924	981,024	8,200,947	862,627	13,628	31,108	37,932	713,940	483,686	87,926	35,931	149,358
1925	683,259	9,136,437	666,485	16,104	36,401	45,393	763,743	520,053	61,817	38,339	161,659
1926	377,772	9,239,548	833,544	17,978	39,373	48,294	770,874	573,367	84,437	36,936	164,530
1927	680,633	9,050,117	874,733	12,956	36,566	44,935	901,129	517,763	80,095	34,532	173,207
1928	1,036,912	9,219,800	912,961	14,477	38,156	51,544	901,474	500,745	75,348	34,142	176,299
1929	841,634	9,640,356	800,649	14,574	42,614	56,433	1,007,323	534,988	73,828	36,886	170,646
1930	782,273	6,904,089	822,180	14,825	31,752	40,699	896,265	467,526	69,385	26,051	161,197
1931	333,654	4,514,924	889,702	13,932	18,426	25,945	851,081	382,089	59,645	16,523	125,429
1932	288,242	2,933,790	932,221	17,095	8,781	13,681	784,159	309,710	49,855	10,159	76,741
1933	225,435	3,854,692	744,076	13,002	13,346	23,232	905,656	333,630	49,541	13,961	63,373
1934	* 300,000	4,100,000	527,413	13,177	15,977	26,780	903,345	357,500	57,385	* 15,000	77,682

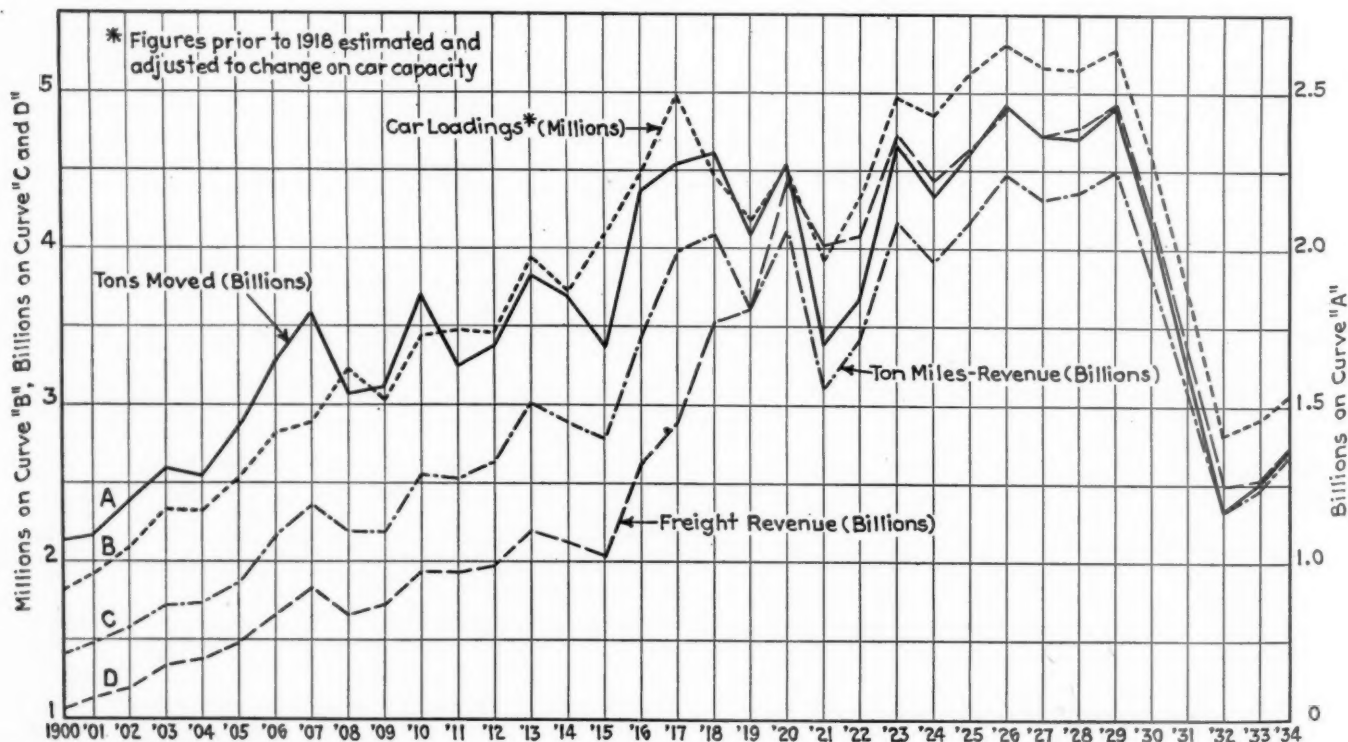
* Estimated.

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thus far. Export trade has declined continuously until the improvement recorded in 1934 reversed the trend due to the devaluation of the American dollar. In terms of gold, however, the trend is still down and until this is counteracted no lasting change is likely to occur.

We are inclined to measure railway prosperity by carloadings, but today this is a fallacious index unless these loading are interpreted properly. The first premise

in the utilization of statistics should consider the comparison of like things. Carloadings were not reported prior to 1918 and the most reliable index of railroad activity is that showing net revenue ton-miles. Economists prefer to visualize freight movement in terms of commodities and not ton-miles, since the volume of national production is the factor of prime importance. Theoretically the 30,785,594 cars loaded in 1934 in terms



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Chart I—Freight Traffic and Revenue Since 1900

of car capacity might represent over 40,000,000 carloads if present 80-ton cars and 100-ton cars had not supplanted the 40-ton and 50-ton cars widely used by the railroads in 1905.

Basic Premises in Analysis of Traffic

Before taking up the question of the problem presented by traffic diversion, it is important to state certain premises and assumptions which must form the background for any future industrial upturn in general or for railway traffic in particular. These assumptions are:

1. That the long term trend of industry in the United States is still upward.
2. That railway traffic will follow the course of general business, it being obvious that any conflicting assumption would indicate that the business prosperity of the country had reached its peak.
3. That railroads will gradually enlarge their interest in the supplementary services furnished by highway and

and other heavy commodities moved over the railroads as a result of this activity.

Thus a greater number of tons were moved in relatively fewer cars than in 1934. Since 1920 fabricated articles have been more and more important in railway traffic.

Automobiles, machinery and special equipment may require one freight car for a load with as light a weight as 12 tons. Less coal has been produced and shipped due to inroads from competitive fuels and due to economies achieved by the railroads in the way of locomotive fuel consumption. Chart I, the figures showing tonnage, revenues and revenue ton miles in Table B must be interpreted in view of these factors.

The loadings for the years 1900 to 1917 have also been estimated using revenue ton-miles, tons carried and average tons per car as a source in connection with other important indexes. *These estimates have been adjusted to show carloadings for the years prior to 1918 in terms of present day car capacity.* Before 1900 the average capacity per car was less than 17 tons compared with present day average capacity of about 48 tons per car. It is, therefore, obvious that even in the '90's 50,000,000 cars might have been necessary to handle even 50 per cent of existing traffic. For this reason the adjustment was considered necessary in order to portray a true picture of traffic volume.

Why Traffic Continues Below Profitable Level

The present reduced level of production corresponds to the existing depression throughout the world. Joseph B. Eastman, the Federal Co-ordinator of Transportation, in a special study of traffic of a comprehensive nature summarizes the problem of traffic volume as follows: "It appears unlikely that increased production within the immediate future will provide a volume of carrier freight traffic as large as that which existed prior to 1930. This is true because of the re-location and decentralization in industry, change in power and fuels, and increase of private transportation." Few people would disagree with the first sentence above, but the last sentence appears open to discussion.

Basic Commodity Production the Key to Revival

The reason there is no possibility for any immediate volume of traffic as large as that which existed prior to 1930 is obvious and Table A reveals the cause with striking force. *Traffic will not return to the pre-depression level until cement production, lumber production, ingot production and other major activities double existing levels.* Traffic will not return until cotton and wheat are exported again in large volume and our balance of trade doubles. The following quotation from a Department of Commerce bulletin entitled "Factors Affecting Foreign Trade Policy" tends to substantiate this point:

Many of our industries depend to a very marked degree on foreign markets for outlets. In 1933 (the latest year for which statistics are available) 66 per cent of all cotton produced in the United States was exported, 64 per cent of the gum resin production, 58 per cent of the prunes, 51 per cent of the sardines, 50 per cent of the tractors and parts, 49 per cent of the borax, 47 per cent of the patent sideupper leather, 41 per cent of the power-driven metal-working machinery, 30 per cent of the office appliances, 12 per cent of the aircraft (including engines and parts), 11 per cent of the lumber and timber, and 7 per cent of the automobiles, to mention only a few important commodities.

It is doubtful that those who recommend the virtual renouncing of our export effort have fully considered what this would mean. *By this time there should be a clearer understanding of what the great decline in our export trade has meant, in terms of capital losses and employment and paralyzed purchasing power. The cutting off or further reduction of exports of important*

TABLE B—Traffic and Revenue

	Total tons carried (Mil- lions)	Car loadings (Thou- sands)	Rate per ton-mile	Revenue ton-miles (Bil- lions)	Gross rev- enues (Mil- lions)	Freight revenues (Millions)
1900	1,071	18,120	\$0.00729	141	\$1,501	\$1,052
1901	1,084	19,200	.00750	147	1,612	1,126
1902	1,192	20,981	.00757	157	1,720	1,197
1903	1,299	23,480	.00763	173	1,908	1,338
1904	1,275	23,240	.00760	174	1,975	1,370
1905	1,428	25,270	.00766	186	2,082	1,469
1906	1,631	28,111	.00748	216	2,326	1,659
1907	1,796	28,940	.00759	236	2,589	1,825
1908	1,533	32,210	.00754	218	2,441	1,656
1909	1,557	30,100	.00763	218	2,473	1,720
1910	1,850	34,400	.00753	255	2,812	1,929
1911	1,624	34,812	.00757	253	2,853	1,926
1912	1,685	34,512	.00744	264	2,906	1,968
1913	1,915	39,480	.00729	301	3,208	2,198
1914	1,843	37,200	.00733	288	3,128	2,126
1915	1,685	40,970	.00732	277	2,956	2,037
1916†	2,180	44,781	.00716	343	3,473	2,631
1917	2,270	49,987	.00773	398	4,115	2,897
1918	2,306	44,592	.00950	408	4,985	3,522
1919	2,043	41,833	.01000	361	5,250	3,624
1920	2,260	45,118	.01052	413	6,310	4,420
1921	1,691	39,323	.01275	309	5,633	4,004
1922	1,841	43,207	.01177	342	5,674	4,085
1923	2,334	49,812	.01116	416	6,419	4,712
1924	2,172	48,543	.01116	392	6,045	4,437
1925	2,304	51,224	.01097	417	6,247	4,648
1926	2,465	53,099	.01081	447	6,509	4,905
1927	2,364	51,635	.01080	432	6,246	4,728
1928	2,362	51,590	.01081	436	6,212	4,771
1929	2,452	52,828	.01076	450	6,373	4,899
1930	2,063	45,878	.01063	383	5,365	4,145
1931	1,605	37,272	.01051	309	4,246	3,302
1932	1,168	28,180	.01046	234	3,168	2,485
1933	1,259	29,220	.00997	249	3,138	2,528
1934	1,363	30,785	*.00978	*269	*3,311	*2,733

* Preliminary.

† Fiscal years ending June 30, prior to 1916.

‡ Figures adjusted prior to 1918 to equal change in car capacity.

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airway and thus restrict further inroads from outside competition.

4. That co-ordination of rail and highway services will serve to increase freight movement rather than to diminish it.

5. That natural depression causes and not competition is the chief reason for existing low traffic levels.

Freight revenues in 1900 for all railroads were a little over 1 billion dollars, whereas in 1934 they were over 2½ billions. Freight transported in 1900 amounted to 1,071,000,000 tons and in 1934 it had increased to only 1,363,000,000 tons. The discrepancy between increased revenues and tonnage may be explained by changes in type of traffic since the turn of the century. Between 1900 and 1906 a net peak in railroad construction was recorded, and a great many tons of steel rail, sand, gravel

commodities from this country would impair the standing of whole industries, and of many communities, destroying the purchasing power of those communities for the products of non-export industries. (*Italicizing ours.*)

During the depression years the truth of the foregoing has been revealed with striking force. Superimposed on the 10 per cent of our exported production—which represents the profitable part of our exports—there rests a great structure of production for domestic use which collapses with the decline of the export market. Moreover no reasonable individual expects railroad traffic or general business ever to show sustained improvement until production of basic commodities indicates that business once more is trending upward.

Evidence which testifies to this fact is revealed by Chart II showing carloadings and production for the fifteen years from 1920 through 1934. It is not possible to prepare indexes showing loadings of less-than-carload lots in contrast to production, but it is well known that even though this class of freight has been particularly vulnerable to inroads by motor carriers, it nevertheless has shown greater stability than most of the heavy commodities. During the depression period consumers' goods held at a level far above that of durable goods. It is remarkable that railroad revenues from consumers' goods, after showing a decline of 33 per cent from 1929, suffered very little additional loss over the last 2½ years, and yet it is this type of freight that has been most vulnerable to competition from motor trucks.

Truck Traffic Largely Consumers' Goods

The diversion in livestock and animal products traffic to trucks is apparent, but in the large manufactured and miscellaneous group no serious diversion has occurred, and the same is true with respect to haulage of mine products and lumber. A combination of all production factors as against the loadings of these five important groups of goods indicates that the railroads are carrying the same proportion of total goods produced as they were in 1920.

It is significant, however, that of the total traffic avail-

able for railroads and motor trucks, the latter appears to have suffered the least from depression. The motor trucks not being subject to dependence on durable goods but rather on consumers' goods obviously have experienced less contraction in freight volume during the last five years than the railroads *but the latter would quickly retrace the traffic losses which have occurred since 1929 once the durable goods industries recover.*

Traffic Losses to Water Lines

The important thing for the observer to appraise is the amount of traffic which might have been available to the railroads in 1932, in comparison with the amount the railroads actually received. Many widely discussed traffic losses are either non-existent or imaginary. For example, steamships operating on the Great Lakes have been handling the same type of traffic, such as coal and ore, for many years. Since the beginning of the steel industry in this country a heavy volume of ore tonnage from the Lake Superior ranges has moved by rail to the upper lake ports and is there reloaded on lake vessels destined for Lake Erie ports.

For many years this ore movement has represented a large proportion of the total traffic on the lakes. Unfortunately it has never been available to the railroads and in all probability never will be. The same is true with respect to the coal movement on the Monongahela river and yet all of these services represent non-rail shipments which are included in the complaint against "diversion from the rails."

In 1932 the railroads might have originated 100,000,000 additional tons of bituminous coal if the public utility industry had not produced 76,885,000,000 kilowatt hours of energy. This production represents a diversion only to those people who would prefer a railroad movement of 100,000,000 tons of coal in place of all the modern conveniences and facilities introduced by the electric power industry since 1900.

(The second and concluding part of this article will appear in an early issue.)

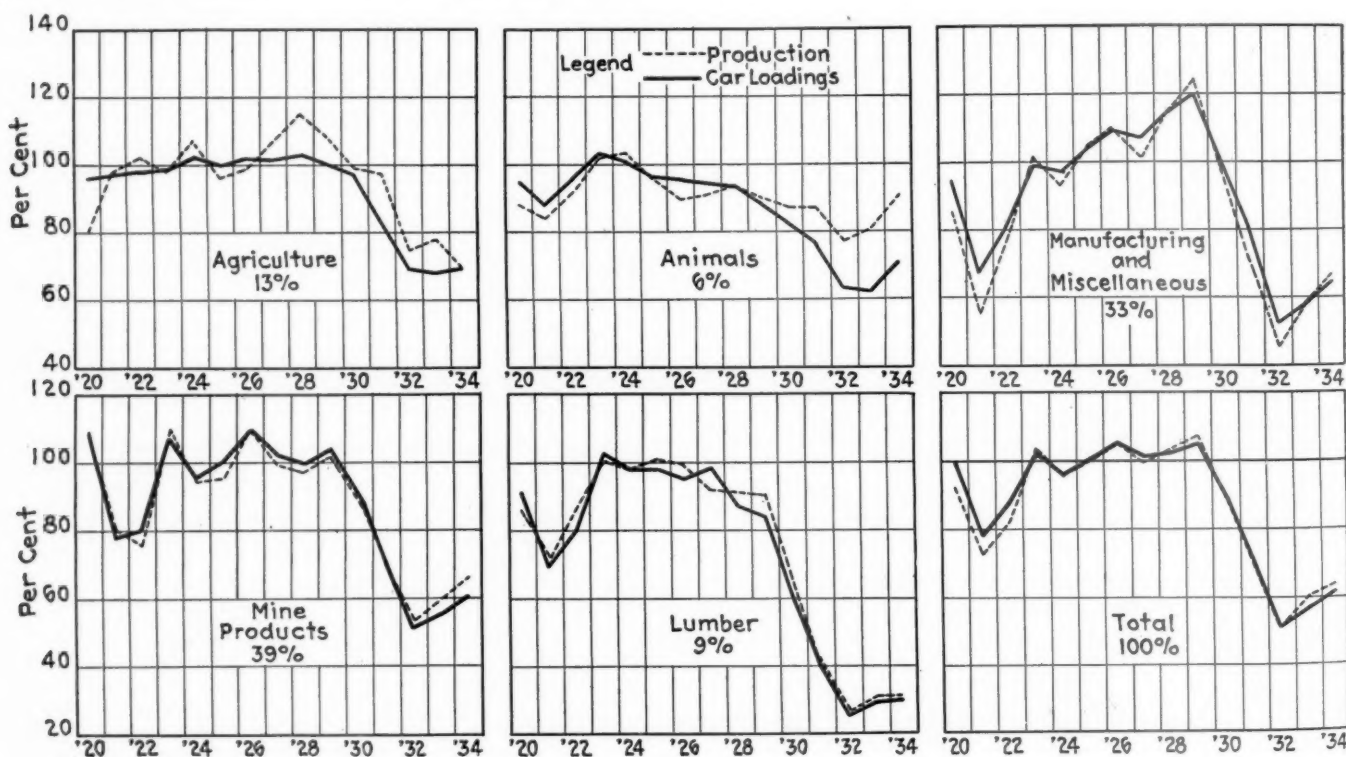


Chart Courtesy Cleveland Trust Company (Redrawn)

Chart II—Carloadings and Production—Average, 1923-35=100

Arch-Bar Truck Failures Costly

Bureau of Safety reports increasing hazard and recommends action to minimize the risk until arch-bar trucks are removed from service

IN his report of an accident on the Western Pacific at Red Rock, Calif., on June 9, in which a freight train moving at about 10 or 15 miles an hour was wrecked by the failure of an arch-bar truck on the fifty-second car, following which the wreck took fire, W. J. Patterson, director of the Bureau of Safety, again took occasion to discuss the serious hazards in the use of arch-bar trucks. The report repeats, with further elaboration, the warnings which have been issued by the Bureau in reports of previous derailments caused by arch-bar failures. The following is an abstract of Mr. Patterson's discussion of the hazards of arch-bar trucks.

The failures, weaknesses and the hazards of arch-bar trucks are referred to in the proceedings of the Association of American Railroads over a long period of years prior to the date of any action by that organization which was designed actually to curtail their use. As early as 1921, the question of eliminating arch-bar trucks was considered by the Committee on Car Construction and advocated by some members of the committee and also in discussions by other members of the association. At that time, however, the Committee on Car Construction was engaged in designing a standard cast-steel side frame, with due consideration for previous developments which had been made by the manufacturers, the Master Car Builders' Association, and the designs which had been put into use by the United States Railroad Administration. It is to be noted that cast-steel truck side frames were used on approximately 100,000 new freight cars built under the United States Railroad Administration and also that cast-steel side frames were specified for all necessary renewals on existing equipment. The activities of the Association of American Railroads culminated in the adoption of the cast-steel side frame as recommended practice in 1923. The design was revised in 1925, and in 1927, Rule 3(t) was passed, making it mandatory that cast-steel truck side frames, conforming to A.A.R. specifications, be applied to all interchange freight cars built on or after July 1, 1928.

At various times, many attempts have been made to improve and strengthen arch-bar truck design, but, with the increased load capacities and increased train speeds, this type of truck continued to fail, and proved to be such a hazard in operation that additional mandatory rules were promulgated by the A.A.R. to eliminate it entirely from interchange service. In 1928, a rule was adopted by the A.A.R., effective January 1, 1929, to the effect that new trucks would be equipped with cast-steel side frames when applied to new or rebuilt cars on or after October 1, 1929. In 1929, a rule was adopted, effective January 1, 1930, requiring that new trucks applied to any car on or after March 1, 1930, and second-hand trucks applied to new or rebuilt car bodies on or

after January 1, 1930, would be equipped with cast-steel side frames; and a rule effective January 1, 1931, provided that trucks with arch bars would be prohibited in interchange effective January 1, 1936; this effective date, however, has since been extended to January 1, 1938.

Fourteen Accidents Cost Approximately \$275,000

The number of accidents investigated by this Bureau in which the failure of arch-bar trucks has been involved has increased considerably during the past year. During the five-year period ended June 30, 1935, investigations were made of 14 accidents involving arch-bar trucks, these 14 accidents resulting in the death of 23 persons, the injury of 24 persons, and a cost of damage to track and equipment and clearing wreckage amounting to approximately \$275,000. Seven of these 14 accidents, including the accident here under investigation, occurred during the year ended June 30, 1935, and in the reports covering several of these accidents attention has been called to the necessity for eliminating arch-bar trucks from service.

The use of arch-bar trucks is not confined to freight equipment; in fact, figures obtained in connection with the investigations of several recent accidents show that on some roads a large percentage of locomotive tenders are equipped with arch-bar trucks. Attention is further directed to the fact that tank cars have been involved in many accidents caused by the failure of arch-bar trucks and it frequently happens that such tank cars are loaded with gasoline or other dangerous or inflammable articles and that fire breaks out in the wreckage and adds to the destructive results of the accident.

The figures previously given, indicating an expense of approximately \$275,000 as a result of the 14 accidents investigated by the Commission, represent only a small percentage of the expense to the railroads of the country as a result of using arch-bar trucks. Several railroads do not keep records which enable them to determine what expense they are incurring for repairs to arch-bar trucks, but, in some cases where such records are kept, the expense so incurred is very large; on one road, for example, it was found that in one year the cost of repairs and the cost of accidents involving arch-bar trucks amounted to \$183,817, this amount being divided about equally between cost of repairs and expense of accidents.

The facts above set forth indicate that for many years it has been recognized by the railroads that arch-bar trucks are not satisfactory; their use has resulted in many serious accidents, coupled with loss of life and injury to persons and large property loss, and undoubtedly it is a conservative statement that they are costing the railroads of the country millions every year for accidents



and repairs. Some railroads are taking the only effective step which can be taken to combat this situation; they are eliminating, and in some cases already have eliminated, such trucks from service. On the other hand, however, little if any progress is being made by many railroads and private car lines, and in view of the accumulated record of failures surrounding the use of these trucks it is apparent that more effective measures must be taken to avoid the continual hazards incident to the use of arch-bar trucks.

Recommendations

- 1—That arch-bar trucks be removed from service at the earliest practicable date.
- 2—That until arch-bar trucks can be eliminated from service, a reduction sufficient to guarantee safety of operation should be made in the permissible load limit on cars equipped with such trucks.
- 3—That inflammables, explosives or other dangerous articles should not be transported in cars which are equipped with arch-bar trucks.
- 4—That provision be made in interchange rules whereby a receiving line may refuse to accept from a connecting line any car equipped with arch-bar trucks.

Back to the Railroads^{*}

By Dr. Harry J. McGregor†

FOR the past 15 years or more the general trend of traffic has been away from the railroads and on to the highways. My observations as a member of the Highway Commission of the state of Montana have convinced me that this movement is entirely wrong and that the subject is not being duly considered by the public and taxpayers. I feel sure that if a little time were given to considering carefully what is taking place and the consequences which will arise when we take freight and passenger traffic from the railroads and place it upon our highways, the conclusion would be that we are going in the wrong direction. I feel that a united campaign should be started to retrace our steps and in place of allowing passenger and freight traffic to leave the railroads and go to the highways we should turn it back to the rails.

Highways Not Intended to Serve as Railroads

To begin with, the highways of Montana were not built by the railroad companies nor by the independent trucking companies. They were built by the auto owners themselves, either through federal taxation or through state taxation of gasoline. When the highways were built, they were intended for the use of the man who drives his car over the highway and maintains them, and the farmers who carry their produce to the nearest railroad center. These highways were not intended to serve as railroads and if they had been, no doubt the railroads would have had much to say concerning their construction.

We are now asking the highways to do the same amount of work that 90 lb. of steel will do for the railroads. This cannot be accomplished unless the highways are constructed to withstand it. The revenue for heavier highway construction should come from the vehicles that abuse the roads. The highway of today

is literally cluttered up with buses and trucks belonging to the railroad companies, private motor freight lines and others which are paying very little toward the upkeep of these roads. The highway is their place of business. On it they make their revenue but they are not paying their proportionate share in comparison with the abuse they are giving the roads, the nuisance they are creating to the general public and the accidents they are bringing about.

Railroads Assessed at \$52,000 a Mile

In Montana the railroads are assessed at approximately \$52,000 a mile and are taxed at 40 per cent of this amount. If other enterprises or business concerns pay from 25 to 30 per cent on their assessed valuation, it is evident that the railroads are contributing considerable in taxes to the upkeep of the state of Montana. This money is of great assistance to our schools and also other state departments. If railroads are allowed to abandon their own lines and conduct their business on the highways, they are going to be benefited in two ways. First, they will be getting the use of the highways without much cost to them, and second, they will be getting a decrease in their assessment and taxes. At the same time, the revenue to the state will be reduced and the load of the taxpayers of the state will be increased because maintenance costs will mount and will continue to do so.

With all due respect to the railroads we must admit that they are endeavoring to hold to their rails. It is evident that they dislike to give them up, but as rapidly as highways are completed, independent lines are given franchises to carry freight and passengers directly alongside the railroads and they are forced to protect their own business by entering this field of transportation.

Instances are on record in the state of Montana where several companies are allowed to operate over the same highway because the Montana Railroad Commission allows several franchises over the same road when any one of the competing companies could deliver the necessary service. The proper duty of the railroad commission is to regulate the railroad companies and it should be confined to that work. If it is going to allow competing bus lines to run over the highways as it is now doing, thereby increasing the damage and abuse to the roads, it seems as though the users should be made to produce some revenue to the highway department for the use of the roads. The law does not care for the highway department or its maintenance costs but the highway department must maintain the roads as a place of business for these companies without any additional revenue from them.

Many Motor Carriers Evade Gasoline Tax

Many buses and freight routes are crossing the entire state, carrying gasoline with them and not spending one cent in the way of taxes for the upkeep of our roads over which they are doing a profitable business. In addition, large trucks are being equipped with Diesel engines which enable them to run through our state on a small amount of low grade oil purchased without tax in some other state. In many instances, two or three trailers which use no gasoline are loaded down with the largest possible tonnage, which is breaking down the edges of our highways. They act as a public nuisance upon the road. Many are not carrying proper equipment and are the cause of accidents and they serve in many cases as an obstruction to the auto driver, who is paying the tax.

During the past summer we saw a small circus traveling through our state, going from town to town and

^{*} An address delivered at Red Lodge, Mont., August 1, 1935.

[†] Chairman, Montana State Highway Commission.

using as its means of transportation trucks upon the highway. The tax on the small amount of gasoline it used in no way compensated the highway department for the damage it caused.

Truck Service Duplicated

A request was made by the highway commission not to allow more than one transportation company upon any one highway because we knew maintenance costs would rise and we knew that the trucks were not acceptable to the public. Our request was ignored. This instance was between Butte and Great Falls where the Great Northern runs buses and freight service in competition with the Montana Motor Freight lines and the Inter-Mountain bus service. The control of this highway transportation, when it affects the roads, should be in the hands of the highway commission. If one transportation company is not delivering adequate service, it is the duty of the railroad commission to see that it does deliver proper service and not its duty to overload the highways with competing lines unless it is going to provide revenue to maintain the highways. It is highly essential that better co-operation be secured from the railroad commission in this regard. If this is not done, the result will be a serious destruction of the roads.

Since we are confronted with the problem of carrying freight and passengers which rightfully belong upon the railroads, it will become necessary for the highway commission to adopt drastic regulations to protect itself, the traveling public and the highways. In the first place, all trucks should be required to carry proper equipment such as lighting, adequate brakes, etc. A certain width, as well as height, of trucks will have to be established so that automobiles can pass them without danger. A tonnage limit must be placed upon the trucks in order to discontinue the practice of overloading. In the southern part of Montana trucks are carrying as high as 100 barrels of oil from Wyoming to Montana refineries tax free and at rates lower than those of the railroads running alongside and as a result Montana taxpayers are the losers. Limitation in tonnage will necessarily have to be established in order to stop this practice.

In addition to regulation, we must obtain some revenue from these abusers of the highways. If they insist upon continuing the use of the roads, it will be necessary to create a gross revenue tax levy sufficiently high to yield a reasonable profit to the state for permitting them the use of the highway as their place of business. This gross revenue tax should apply to all transportation companies and if placed at 10 per cent, would go far to correct the situation. I would go further than this and take in the commercial truck lines operated by the commercial houses, chain stores, etc. I would suggest an adequate tonnage tax of one cent a mile per ton. This tonnage tax could be used in helping maintain the highways.

Without some sort of taxation system we cannot keep up a proper highway system, and it is my idea that by placing the very strictest regulations in force and the highest possible tax upon them we are going to protect the highways and at the same time accomplish what should be accomplished now—that is, the removal of these obnoxious trucks and buses from the highways and the placing of the tonnage back where it came from and where it rightfully belongs,—on the steel rails. In doing this we are going to help not only the roads but our school system and our many other state departments by continuing to receive a just revenue in taxation from the railroads which we are bound to lose if they are abandoned.

Great Western of Britain Celebrates Centenary

THE centenary of the Great Western of Great Britain was celebrated on August 30 and 31, on the former date with an evening radio program and on the latter with a large formal luncheon in the Great Hall of Bristol University, Bristol, England. At the luncheon Sir Robert Horne, chairman of the G.W.R., announced that the road would further commemorate the event, and Bristol's association with the company, by the inauguration of a new fast train between London and Bristol.

This train—the Bristolian—made its first run on September 9; it covers the 118¼-mi. London-Bristol run, via Bath, and the 117½-mi. Bristol-London run, via Badminton, each in 105 min. or at average speeds respectively of 67.6 and 67.1 m.p.h. It is the fastest train in Great Britain on a run of more than 100 mi.

The August 30 radio program took the form of a train journey from Paddington to Penzance, via Bristol, with detours through Severn tunnel to the West Wales coast. Great Western officers and employees participated, giving listeners a vivid impression of the history of the railway. As described in the *Railway Gazette* (London): "Brief talks by engine drivers, ticket collectors, lost property officials, signalmen, and other employees who spoke in their own dialects, were interspersed with noises made by the whistling of engines and shunting of trains. A particularly interesting feature was an argument between engineers of the Cheltenham Flyer and the Cornish Riviera Limited as to the respective merits of their locomotives."

August 31 was the actual birthday of the corporation and the Bristol luncheon on that date was attended by a number of distinguished guests. Speakers included Sir Robert Horne, the G.W.R. chairman; J. H. Thomas, Secretary of State for the Dominions, who began his career in the G.W.R. shops and was thereafter an engine-man before he became a union official and entered politics; and the Lord Mayor of Bristol. Directors and officers of the railway and guests from London for the luncheon were carried to Bristol on a special train, which was hailed by cheering groups at several points en route. Speeches at the luncheon were followed by the showing of the Great Western's centenary film—the *Romance of Railroading*—which depicts events and personalities in the railroad's history.

Among the most glamorous of these latter was Isambard Kingdom Brunel, who was chief engineer of the Great Western from its inception until his death in 1859 at the age of 53. Brunel, an outstanding engineer by the time he was 20 years of age, was responsible for the original 7-ft. gage of the Great Western. Many of the bridges which he designed are still in use—Sir James Milne, general manager of the G.W.R., says of Brunel's work, "even today we are reaping the benefit of his amazing prescience." Brunel was also identified with steam navigation for it was under his direction that the Great Western—the first steamer to make regular Atlantic crossings—was built in 1843-45; he also designed the Great Britain, the first large iron steamship with compartments and propelled by a screw.

An interesting aspect of the G.W.R. centenary was the publicity which it received in Great Britain. The *Railway Gazette* (London) published a 52-page supplement in connection with the event while *The Times* (London) published a 28-page "Great Western Railway Centenary Number" as the second section of its August 31 issue.

Up-to-the-Minute Operating Statistics*

Missouri Pacific provides each division superintendent with daily records of his territory

By R. C. White

Assistant General Manager, Missouri Pacific

ON THE Missouri Pacific, the superintendent is a virtual general manager of his division, directing all operations through the medium of his operating staff, consisting of trainmasters (office and road), master mechanic and division engineer who, with their subordinate officers, supervise the three branches of the division personnel, namely, transportation, mechanical and maintenance of way forces.

To enable the superintendent to exercise effective control over his operations, to put his finger on the high points and the weak points and to direct the work of his subordinates into the proper channels to produce quick, effective and economical results, accurate, dependable and up-to-the-minute statistical information and records must be provided and kept constantly before him. Statistics and records giving daily information covering vital factors in the railroad operation must, of necessity, be accurate. This information must be organized, correlated and arranged in orderly and logical sequence. Half-baked, delayed, haphazard or incomplete data or statistics which cover only a limited phase of the operation do not afford an adequate grasp of the situation to permit effective supervision and economical results.

The statistical information should also be comparative. The superintendent and his staff should know how the volume of the traffic, the performance and the costs compare with last week, last month and last year, and the figures should be cumulative, this month to date, last month to date and same month last year to date. Such comparisons prompt the superintendent to search for the cause of unsatisfactory or uneconomical operations.

The system of records on the M. P. provided for the superintendent, his staff and their subordinate officers is described below.

Daily Statistical Records

There is a standardized set of 18 daily running records. The forms of these records are printed, numbered and indexed. Each superintendent keeps them in numerical order, in a standard binder provided for the purpose and the figures are entered thereon daily. Columns are provided, showing comparative figures for today, to-date, same day last month, last month to date, same day last year and month to date last year.

The comparative volume of business is given daily by records showing freight and mixed trains run, freight and mixed train-miles, gross ton-miles, train hours, loaded car-miles, empty car-miles, cars of commercial freight loaded, cars of commercial freight received from connections and cars of commercial freight delivered to connections.

The quality of the service is given the superintendent

by daily records showing the performance of important passenger trains, the performance of redball freight trains, train accidents, personal injuries, bad order cars, etc.

The efficiency of performance is given in comparative records of gross tons per train-mile, both directions and direction of traffic; percentage of tonnage rating, direction of traffic; train miles per hour; overtime per train-mile and per 1,000 gross ton-miles; pounds of coal used per 1,000 gross ton-miles, passenger and freight; pounds of coal used per 100 locomotive miles, switch and work; cars handled per switch-engine hour, by yards; number of man-hours per engine handled, by roundhouse points; number of tons of l.c.l. freight handled per man-hour in warehouses, by principal stations; and daily overtime and constructive time.

The unit costs of operation in comparative form are furnished daily in records of overtime cost per train-mile; overtime cost per 1,000 gross ton-miles; freight train wage cost per train-mile; freight train wage cost per 1,000 gross ton-miles; cost per switch engine hour and cost per car handled, by yards; cost per engine handled, by roundhouse points; and cost per ton of l.c.l. freight handled by principal stations.

Four days after the close of each period, namely, the 10th, 20th and last day of the month, cumulative figures are furnished for the 10-day, 20-day and monthly period showing the total transportation expenses, the number of trains, the train mileage, ton mileage, wage costs, as well as yard, enginehouse and warehouse costs, with the increases or decreases over or under last month and last year, and the percentages of increase or decrease.

Monthly Running Records

Fourteen monthly running records are kept in the running-record binder and used in connection with the daily records. The monthly records cover mileage in power and engine assignment; caboose supplies, the cost by individual cabooses per 100 miles; electricity, gas, water and ice bills, and an analysis of water costs; monthly payrolls; station earnings, comparative by stations; stock struck; cost of handling coal; overtime, all classes, monthly; constructive time by classes, monthly; transportation expenses compared with the forecast; mechanical expenses compared with the allotment; and maintenance of way expenses compared with the allotment.

In addition to the daily and monthly running records, a few historical running records are included as follows, showing by months for 5 to 10 years: Gross ton-miles; gross tons per train-mile; commercial freight loaded, received from and delivered to connections; freight train wage costs (unit costs, overtime and total); engine house labor and unit costs; fuel consumption per 1,000

*From an address delivered before the American Association of Railroad Superintendents at Chicago on June 19.

gross ton-miles, freight and passenger; and fuel consumption per 1,000 gross ton-miles, switch and work service.

There are also kept separately on cards provided for the purpose historical running records by months (sufficient space being provided on the cards for 19 years' records) showing the cost of water, gas, electric current and ice, one card for each point and each kind of expense, one space horizontally for each year, divided into 12 columns, one for each month. This simple arrangement of figures enables the superintendent to spot any abnormal fluctuation at a glance.

Personnel Records

One of the most important records is the individual personal record file of each employee above the rank of laborer. (Records are maintained for mechanical laborers, but maintenance of way laborers are required to fill out only a mimeographed questionnaire). These records are kept in standard backers, properly numbered, one card for each employee. The index cards are filed alphabetically by names and classes of employees. The card shows the full name, occupation, date of birth, seniority date and date of each change of the employee's status, namely, the employed, promoted, transferred, granted leave of absence, cut off the board or dismissed. On the back of each card for train, engine and yard employees a record is kept in date order of all chastisement or punishment administered, showing charges and credits for demerits assessed and worked off by lapse of time with a clear record. The personal record file contains application for employment, physical examination, rules examination (for employees subject to rules examination), progressive mechanical examination (if fireman or engineman), receipts for equipment and circulars and correspondence affecting the record.

A record is kept of efficiency tests made by division officers in connection with observance of rules by employees in train and yard service and this record is kept on a standard form, by names of employees, by occupations (names in alphabetical order under each occupation), giving the dates and kinds of tests and whether the test resulted in observance or violation of the rule upon which tested.

There is a standardized method for issuing general instructions and maintaining them up to date. Four basic books of instructions are kept in loose-leaf binders standardized and captioned, properly numbered and indexed as follows: Operating department instructions put out over the signature of general officers of the operating department; maintenance of way and engineering instructions issued over the signatures of the chief engineer and the engineer maintenance of way; mechanical instructions put out over the signature of the chief mechanical officer; and labor bulletins, giving decisions and interpretations of wage agreement questions, issued over the signature of the assistant general manager in charge of labor matters.

Instructions of a general nature are not issued except in conformity with the system established in the regular form and properly numbered for filing in standard binders. No supplements or amendments to these standard instructions, filed as above outlined, are issued. If it is necessary to change any part of the instructions contained in the subject matter of any one of these numbered documents, the document is revised and rewritten, carrying the same number, with a lettered suffix and cancelling former instructions.

Running Records for the Subordinate Officers

The trainmaster keeps daily running records on train and ton-miles, train load, overtime and wage costs,

revenue freight loaded and received from connections and yard operation statistics. The trainmaster's most useful record is his pocket overtime record, posted by him personally each day for the previous 24 hr., showing the cost of overtime by individual local freight trains.

The division engineer has an indexed and numbered set of running records which tell him how he stands on man-hours and expenditures, overtime, slow orders, crossties, the performance of work trains and maintenance of way machines, water costs, personal injuries, stock struck, timekeeping checks, cost data, etc.

The bridge and building supervisor personally keeps records, numbered and indexed, on man-hours and expenditures, overtime, slow orders, the performance of pile drivers, the status of the bridge and building program, personal injuries and timekeeping checks.

The roadmaster personally keeps records, numbered and indexed, on man-hours and expenditures, overtime, slow orders, personal injuries, timekeeping checks and the performance of maintenance of way machines.

The master mechanic has a numbered and indexed set of running records, showing man-hours and expenditures, engine failures, engine assignment, mileage in power, hot boxes, cost of handling engines, cost of handling coal, miles per locomotive per day, miles and days per boiler wash, etc.

The running record idea is carried down to the yard office and roundhouse by posting each day on a form, kept in a frame on the wall, the unit costs from day to day and cumulative to date, with last month and last year's comparisons. These records are for the purpose of maintaining interest on the part of yardmasters and enginehouse foremen in bringing about the most economical results. There is also posted in yard offices a daily record of overtime by individual engine foremen.

The source of the ton-mile, train-mile, car-mile and wage cost figures is the wheel report and the conductor's trip report. The records covering this information is kept up to within 72 hr. of the actual performance. The ton mileage, train mileage and car mileage figures were formerly kept in the car accountant's office and only monthly statistics were furnished, but with the modern demand for up-to-the-minute information, the force was moved nearer to the superintendent. By adopting more economical and efficient methods, the compiling and distribution of these statistics is effected at a clerical cost no greater than it was under the monthly system.

* * *



Photo by Paul T. Warner

On the Pennsylvania near Paoli, Pa.

Communications and Books . . .

Favors Articulated Units

MINERAL CITY, OHIO

TO THE EDITOR:

A. Giesl-Gieslingen had a letter in the August 17 issue of the *Railway Age*, in which reference was made to an articulated locomotive design submitted by C. Louis Otto, described and illustrated in your August 10 issue. Mr. Gieslingen stated: "The magic of articulation must be taken with a grain of salt," and refers to the fact that the motor-driven train, the "Rebel," has abandoned it.

This is hardly a correct statement, because as a matter of fact this train was not designed or built as an articulated unit. The Rebel is described in your June 15 issue as being operated as a mixed train with equipment being added and removed between terminals, which no doubt had considerable to do with designing it on the conventional plan.

It would seem as though in view of the universal success of the articulated principle and its increased use in many classes of service, including subway, traction and steam roads, that one who would attempt to minimize the importance and advantages of the plan would be "barking up the wrong tree." I believe it has been one of the main contributing factors toward the success of the new light-weight, high-speed, motor-driven trains and it is hard to believe these trains could have been built on the conventional plan and at the same time with the reduced weight (which seems to be the trend of the times), also reduced first costs and operating costs, and in service prove to be as safe, fast and comfortable as they are.

Instead of the articulated principle being abandoned, I will prophesy that just as soon as some practical, workable plan is submitted whereby these articulated units can be quickly and easily coupled and uncoupled into a train of its kind any time and place, as is now done with conventional cars, that we will witness a quick adoption of the plan for a number of classes of service, in freight as well as passenger service.

EDWARD SATTLER.

Would Give Tourists Wider Choice of Return Routes

BALTIMORE, MD.

TO THE EDITOR:

Touring by automobile, because of the ability of the driver to change his route at will, has a distinct advantage over traveling by rail. The latter requires specification not only of the going, but the return routes at the time of ticket purchase. Most travelers have a prior idea of their going route, but are entirely uncertain about the return. This is especially true of those going long distances, particularly from the east to the Pacific coast, etc., and planning indefinite stop-overs, within the ticket limit, on the West coast for example.

To offset the route freedom enjoyed by autoists, and to cater to those disliking the rigidity of a definite return route selected weeks or months before the return is to be made, it is suggested, in the case of round-trip tickets, that an added arrangement be provided whereby, for five dollars (or some such reasonable sum) more than the tariff rate, passengers can obtain going tickets via specified routes, and an accompanying certificate entitling them to any one of previously specified routes returning. The certificate, which could be of identification form, would be honored at destination for a return ticket consistent with the original sale, the ticket carrying with it all of the privileges of stop-over, diverse and optional routes, etc., as could have been normally obtained.

The five dollars would cover the extra clerical work in ticketing and accounting, and might yield a small profit. It would also forestall indiscriminate use of the arrangement, as would be the case were it a free privilege.

An objection would be that it would subject the passengers to extensive solicitation by agents at destination, but that should

not be undesirable, because it would ventilate the entire question of return routes. It might cause scalping or manipulation of certificates, but that could be checked by signature identification, which would be as successful as the system now in use. Additional clerical help would be necessary, but that would be offset by the five dollars.

The carriers now provide an amazing variety of diverse and optional routes with or without additional charge, on round-trips. It is even possible to convert a ticket from one class to another. This scheme is merely an extension of such provisions. It might not encourage any directly new travel, but it would be attractive to the present tourist. It would be especially interesting to the business man using tourist rates, a class requiring the widest possible latitude in choice of routes and arrangements. It would be one more logical feature in the merchandising of passenger service.

K. A. MERING.

New Books

Universal Directory of Railway Officials and Railway Year Book, 1935-1936. Compiled from official sources under the direction of the editor of the *Railway Gazette* (London). 596 pages, 8½ in. by 5½ in. Bound in cloth. Published by the Directory Publishing Company, Ltd., 33 Tothill street, Westminster, London, England. Price, 20 shillings.

This is the forty-first edition of the *Universal Directory* and the third year in which these two well-known railway reference books have appeared as a consolidated volume. The general plan of previous issues is continued, with all data brought up to date and elaborated upon from replies to new questionnaires. Notable among such elaborations are the revised tabulations of the world's railway mileage and of the status of main line electrifications. The lists of railway officers remain, along with brief descriptions of the world's principal railway systems and their latest available financial statistics. Also, there are the usual conveniently-arranged indexes, including the index to countries, the index to statistical and other information, the index to railways and the personal index of railway officers.

National Public Works, Vols. I and II, 281 pages and 226 pages, respectively, 10½ in. by 8 in. Bound in paper. Published by the League of Nations Organization for Communications and Transit and obtainable in the United States from the World Peace Foundation, 8 West Fortieth street, New York. Prices: Vol. I, \$3; Vol. II, \$2.

Because it felt that since 1929 various countries have learned, from their experiences with public works programs, certain things which "would be of inestimable value to other nations faced with similar problems," the League of Nations Organization for Communications and Transit some time ago distributed questionnaires designed to gather data for such an international study. Vol. I, published in the latter part of 1934, contains the replies of 29 governments, including the United States, and Vol. II, just issued, contains the replies of nine additional countries, together with supplementary information furnished by a few governments whose reports appeared in the first volume.

The inquiry was designed to develop data on: Public works undertaken since 1929; the principal administrative and financing methods; the allocation of expenditures as between labor and materials; and the governments' opinions with regard to the results obtained or expected in stimulating business revival and lessening unemployment. The reply of the United States covers 30 pages in Vol. I and consists of two reports—one from the Administrator of Public Works and the other from the Federal Emergency Administration of Public Works. The former, comprising the bulk of the U. S. reply, outlines the various phases of the New Deal spending program, and reports, in its discussion of results, that "men have been put to work more promptly through allotments to the Bureau of Public Roads and to the railroads than through allotments for any other purpose."

Odds and Ends . . .

Streamlined Nicknames

It was inevitable that the railroaders with their genius for nicknames should rechristen some of the new fast trains. The "Zephyr" has become the "Zipper" and, along the Milwaukee, the "Hiawatha" is known as the "Highwater."

A Century of Whistling

The German Railroads inform us that 1935 marks the centenary of the locomotive whistle, the first one having been manufactured by Taylour & Company of Warrington, England, in 1835. Previously, a posthorn had been used.

Railway Pastors

C. L. Meister, mechanical engineer, Atlantic Coast Line, advises that his railroad has a pastor as well as the one on the Illinois Central, recently mentioned in these columns. J. E. Allard, chief draftsman in the motive power department on week-days, becomes the Rev. Allard on Sundays, and serves two Baptist flocks, one at Harrels Store, N. C., and the other at Bolton.

The Wrong Train

A conductor going through a train at Chomutov in Czechoslovakia examined several tickets and told each of the holders that they were in the wrong train. They must, he said, change at once. As his progress along the carriage continued, he found still more passengers who had made a mistake about the train. Then one of them had a bright idea and asked the conductor whether he was not in the wrong train. He was.

Yoicks!

A train-hopping fox is reported in a recent issue of the Railway Gazette (London). The fox, chased by a pack of dogs to the edge of a clearing, leaped aboard a coal car in a passing freight train and was thus carried to safety. The hounds, seeing their quarry's clever escape, were about to follow, but were called off, "not out of consideration for the fox," as the writer puts it, "but for fear they should be run over by another train."

Perfect Scores

Since we published George H. Maenner's claim to be the only railroader to have bowled a perfect score of 300 in league competition, we have been supplied with irrefutable evidence of four other railroaders who have accomplished this feat, namely:

C. W. Morrison, Clerk, C. B. & Q.
M. W. Hasselmann, Custodian, I. C.
N. W. Siebert, Clerk, L. & N.
Ed Mann, Mechanic, L. & N.

B. & O. Boy Makes Good

The letters, P.C., G.C.B., G.B.E., and K.C.B., do not, as one might superficially suppose, represent activities of bureaus of our present government. They are initials of degrees of merit to which the Right Honorable Sir Eric Geddes is entitled. In addition, he has been a major general and a vice-admiral. His other activities have included Director General of Transportation, Minister of Transport, First Lord of the Admiralty, Member of Parliament and numerous others. Yet, with all of this, his first job was that of station agent for the Baltimore & Ohio at Nicolette, W. Va.

Ethiopia's Railway

Recent events have brought Ethiopia's only railway into prominence. This line is French-owned, narrow-gage, and runs 485 miles from Djibouti, in French Somaliland, to Addis Ababa, the Ethiopian capital. The train takes three days to make what would be a fair day's run on most roads. It starts in the morning and stops at night, because natives occasionally take up the rails to hammer them into knives and use the ties for building huts. Therefore, the engineer goes slowly, his

hand on the brake, watching to see that there is always a track ahead of him. At night, at the two stopping places, passengers sleep in a jungle railroad station, the fortunate among them getting cots.

Quintuplets

The five little year-old Dionne girls have brought about such an increase in railroad and passenger traffic to and from Callander, Ont., trading point of the family, that a new railroad station is being built. Heretofore, two old passenger coaches, joined together, standing beside the railroad track, have served as a station.

Glorious Fourth

One of the railroading's interesting coincidences happened at Portsmouth, Ohio, on the Norfolk & Western, on July 4. It is the practice, at the Portsmouth hump—where they weigh coal as it is being classified—to test the scales each day with a carload of coal taken at random from any track that may be handy. To the surprise of Conductor Al Barney and Clerk H. R. Evans, the car they happened to pick on that particular day registered "1776" on the automatic track scale recording machine. Of course, this meant that the gross weight of the car and the load was actually 177,600 pounds but the two zeros are not registered by the machine. It is indeed odd that on the 159th anniversary of American independence the scales should have indicated the year the Declaration of Independence was signed.

Plover Likes the Railroad

In spite of the fact that switch engines and freight cars passed over the spot several times a day, a golden plover laid four eggs in a nest that she made between the rails of an Illinois Central track in Dubuque, Iowa. The eggs were discovered by James Nichols, car inspector. Having found birds' nests in box cars, on brake beams, on tank cars, on deserted engines and many other freak places in the 25 years of his railway service, Mr. Nichols suspected a nest when he saw the plover dancing along one of the rails and scolding at his approach. He found the eggs right in the center of the track in a depression in the cinders. For several days, the plover's mate stayed close at hand, but finally the noise and activity of the busy railroad became too much for him and he disappeared. The mother stuck to her eggs, however, bouncing out of the nest and running alongside and spreading her yellow fan tail in protest when the switch engine and cars came along. The baby plovers, when they arrive, probably will be streamlined in accordance with the latest ideas in railroading.

A Commanding Figure

BETHLEHEM, PA.

TO THE EDITOR:

The leading item in "Odds and Ends," August 24, 1935, recalls to pleasant memory a "champion train caller" of other days. The subject, Conductor James Carney, long since retired and I think is now deceased. Conductor "Jim" Carney was a man of magnificent physique, tall, stately, graceful, dignified, accoutrements and person immaculate, always the courteous gentleman. Paralleling these physical attractions, he possessed a most charming voice of a deep melodious mellowness, tremendous in range, commanding, resonant. To me it was always an enjoyable pleasure, many, many times experienced, to delay boarding his train, at either the Chicago or Detroit terminal, until the last second of departure and witness this imposing figure of a man standing erect, timepiece in hand and thrill to his charge "All Aboard" and hearken to its musical reverberation through the long train shed. I know old-timer contemporaries on the Michigan Central will subscribe to the foregoing and there are many travelers, with a sense of the artistic, who could recall, with the same degree of pleasure, being passengers under this gentleman's kindly supervision. Truly, a man fit to commemorate the ideal type of the American railroad passenger conductor. Poets have chosen lesser material for some of their effusions.

G. H. RIDDLE,
Sales Engineer, Bethlehem Steel Company.

NEWS

Eastern Roads Oppose Reduction in Basic Fares

Counsel for lines, other than B. & O., file exceptions to I. C. C. examiner's report

Counsel for the eastern railroads other than the Baltimore & Ohio have filed with the Interstate Commerce Commission a voluminous and vigorous statement of exceptions to the proposed report submitted by Examiner Irving L. Koch, recommending that the commission require the establishment of two and three cents a mile as maximum passenger fares in coaches and Pullman cars respectively, pointing out that the passenger traffic of the eastern roads has held up better under their policy of maintaining 3.6 cents a mile as the basic fare and making reduced special fares than has that of the western and southern lines that have reduced the regular fares. The statement concludes as follows:

"The examiner's proposals and the estimated reduced revenues which he uses in support thereof in recommending to the commission that it exert this great power have a most disturbing aspect in that there is an appearance of a seeming evasion of full responsibility for the drastic reductions in revenues which would inevitably ensue if a complete and harmonious rate structure were built around the 2 and 3 cent fares recommended by him. He condemns the surcharge of about 10 per cent as being a tremendous sales resistance yet his estimates are based on the supposed ability of the eastern carriers to maintain a 50 per cent difference in Pullman fares over coach fares. He knows that the southern and western lines have not been able to maintain any such difference, but have been forced to establish round trip fares which carry a large part of the Pullman traffic at a two cent rate when the return trip is made in a short period and 2½ cents for a longer period. Again he condemns the basic fares of the eastern carriers as stifling traffic and yet overlooks the fact that much of their traffic has been handled at rates less than the basic fares which he proposes and that there is no possibility of handling that low rated traffic upon the basic fares which he recommends. The report makes it very evident that the examiner realizes, and in fact in many places he discusses, the desirability of such departures from the basic fares; yet his revenue results are built around the flat 2 and 3 cent fares. Thus he attempts to pass the responsibility for the

ensuing severe reduction in revenues which the eastern traffic officers would undoubtedly be forced to make 'as reasonable men' from the commission to the carriers while the commission would be in the comfortable position of having to assume responsibility only for the loss of a relatively small amount of revenue estimated by the examiner. Let there be no misunderstanding of the problem with which the commission is dealing under the examiner's recommendations. If it follows him and attempts to usurp the managerial functions of the railroads it must do the whole job. It cannot start the drain of one of the most important sources of these carriers' revenues and escape responsibility for the ensuing shortage of income sufficient to supply the transportation needs of the country and to provide the people of the United States with adequate transportation."

I. C. C. to Investigate Intrastate Rates

On petition of the railroads the Interstate Commerce Commission has ordered an investigation as to the effect on interstate commerce of the refusal of the state authorities in Louisiana and Idaho to authorize for intrastate application on a large number of commodities emergency surcharges corresponding to those authorized by the federal commission for interstate rates.

August Locomotive Shipments

August shipments of railroad locomotives, as reported to the United States Department of Commerce by the country's principal manufacturing plants, totaled six, as compared with six in July and four in August, 1934. Unfilled orders at the end of August totaled 38 locomotives (14 steam and 24 electric) as compared with unfilled orders for 135 (76 steam and 59 electric) at the end of August, 1934. These figures do not include locomotives built by railroads in their own shops.

Wabash and Employees Reach Agreement

Following a hearing before the United States Mediation Board, employees and management of the Wabash and the Ann Arbor, on September 14, entered into an agreement whereby the road will accept wage schedules and other phases of a working agreement asked by the big four brotherhoods, and thereby averted a strike of approximately 4,500 train and engine service employees. The strike was to have taken place on August 31, but was called off on August 30, when both sides agreed to place their differences before the mediation board.

Commission Preparing for Motor Carrier Regulation

Has been actively at work on plans to make law effective on October 1

Although delayed by the failure of Congress to pass the bill carrying an appropriation of \$1,250,000 for the work, the Interstate Commerce Commission has been making active preparations for the taking effect on October 1 of the motor carrier act, 1935, which is also Part II of the interstate commerce act, and for the organization of its Bureau of Motor Carriers. Announcements of its plans have been withheld pending final arrangements for temporarily diverting funds for the purpose from the commission's general appropriation which may be restored after Congress meets again. Request for authority for such diversion was made of the Budget Bureau after a White House conference on the subject, and the delay in receiving final word from the Budget officers handicapped the formal organization of the Bureau. Up to Wednesday no definite word had been received, and the preparations were being made by a skeleton force under the direction of John L. Rogers, director of the bureau.

The motor carrier act contains a provision that the commission may, if found by it necessary or desirable in the public interest, by general or specific order, postpone the taking effect of any of its provisions to any date not beyond April 1, 1936, and it was thought it would probably be necessary at least to postpone the time for the filing and publication of rate tariffs, but the law itself allows 120 days for the filing of applications for the certificates required for common carriers, the permits required for contract carriers, and the licenses for brokers. Little could be done in the direction of preparing for tariff publication or applications until the commission has issued the necessary regulations and forms, but it is understood that the commission's staff has made progress on this work without the formal completion of the organization, and will have many of them ready by the effective date.

Meanwhile organizations of truckers in all parts of the country, under the leadership of American Trucking Associations, Inc., have been holding meetings in the effort to reach some sort of agreement as to the proper basis or methods of publishing truck rates, and two meetings have been held in Washington of the national rates and tariffs committee of the association. At its first meeting the committee

adopted a resolution recommending that trucking rates be developed "on a basis of reasonable truck operating cost, plus a reasonable profit, and applied under a truck classification of commodities," but at many of the meetings of state and regional committees preference has been expressed for a plan of basing truck rates largely on rail rates, subject to exceptions, and applying railroad classifications generally, with modifications to meet the different conditions, at least until more information can be developed as to trucking costs.

A second meeting of the national committee was held on September 16 and 17, with many representatives of state and regional organizations in attendance, after which the association issued a statement saying that "the problem of determining the principles that shall govern the compilation of rates to be filed proved too knotty for immediate solution."

After reviewing scores of reports from state and regional committees, individual carriers and shippers, and listening to the arguments of 16 operators who appeared in person, the committee came to the conclusion that further and more intensive study had to be given the subject before it would issue definite recommendations to the industry. In the hope of obtaining a more representative cross-section of opinion, the committee decided to hold its next meeting in Chicago, October 16, immediately following the second annual convention of A. T. A. in that city, and at the same time hold a "field day" for all those who desire to present their views on the problem. As a means of bringing a more varied viewpoint to the committee, it was decided to ask the A. T. A. to enlarge the national committee to 12 or 16 members. The larger number of members was suggested possibly to parallel the district offices to be set up by the commission, while the smaller number would represent the present regions adopted by the Interstate Carriers Conference Group of the national organization.

In addition to considering the principles to govern the rate set-up, the committee gave serious study to the manner in which rates should be filed. In that connection it definitely went on record as recommending to the industry encouragement in the establishment of state or territorial agency bureaus, organized by the operators themselves, and identified with the A. T. A. and the national rates and tariffs committee, which would strive to maintain uniformity as to organization and conduct.

Approximately 30 of the 49 state committees have held one or more rate meetings and submitted their opinions to the national group. In addition, many of the regions have acted. The national committee was of the opinion that more state and regional meetings should be held and more serious thought should be given to the problem of arriving at a solution of the rate question in the interests of stabilization and co-ordination under the act. It was suggested that the state committees exchange information among themselves, particularly within regions, and that also there should be regional interchange of views.

The committee also met with John L. Rogers, director of the Motor Carrier Bureau, who explained the plan of organi-

zation of the bureau and answered questions submitted by the committee members.

On petition of American Trucking Associations, Inc., the Allied Truck Owners, and various trucking companies, the commission on September 13 suspended a tariff filed by the Pacific Freight Tariff Bureau proposing reductions in rail rates on gasoline and other petroleum products from California points to destinations in Oregon to meet truck and water competition. In their protests the truck interests made the point that the regulation of truck rates was about to go into effect, and asked that the reductions be suspended pending an investigation.

The national truck association has made public a pamphlet prepared by J. Ninian Bell, of its service bureau, containing a critical analysis of railroad store-door delivery practices and expressing the conclusion that the Interstate Commerce Commission has no direct jurisdiction over such service and "committed a grave administrative error in permitting the rails to enter the field as they did."

\$4 Silk Rate May Be Made Permanent

The Freight Traffic Managers' committee of the Pacific Coast terminal lines (Chicago) has approved a recommendation for making permanent the overland rate of \$4 per 100 lb. on raw silk moving on fast freight schedule. The \$4 rate is now published to expire on December 31.

Court Suspends Order Against Switching Allowances

An interlocutory injunction restraining the Interstate Commerce Commission from enforcing its ruling which ordered the Northern Pacific to cease giving allowances on switching service by September 16 was issued on September 13 by a three-judge federal court at Chicago, in a

case filed by the Interlake Iron Corporation, of Duluth, Minn.

Ticket Scalpers Convicted

As a result of the activities of the Railway Ticket Protective Bureau, two scalpers in Chicago have been convicted and sentenced to 60 days in the House of Correction, the cases of J. Lewis and Isadore Goldstein being carried through two convictions and three separate jury trials. On September 7, as the result of an order from the mayor revoking Goldstein's license to do business as a broker of motor vehicle transportation, his office was closed permanently.

Indiana Rates Found Not Unduly Discriminatory

The Interstate Commerce Commission on September 16 made public a report finding that intrastate rates in Indiana on canned goods, animal and poultry feeds, waste paper, paperboard and related articles, and bituminous coal, required by authority of the state of Indiana through refusal of the Public Service Commission of that state to permit application of emergency charges corresponding to those authorized and maintained on interstate commerce, have not been shown to cause undue discrimination against interstate commerce.

Meals Served in Coaches

Portable steam tables serving low cost meals have been installed in coaches of the Columbine, the Los Angeles Limited and the Portland Rose of the Chicago & North Western and the Union Pacific, to cut the travel cost of patrons riding in coaches and tourist cars on those trains. Under this arrangement, breakfasts are served at 25 cents, luncheon at 30 cents and dinner at 35 cents.



Meals Served in Coaches on the Columbine

C. & O. Staff Discuss Relations with Public

250 employees and officers meet at fifth annual conference at White Sulphur

The fifth annual conference of the public relations department of the Chesapeake & Ohio met at the Greenbrier Hotel, White Sulphur Springs, W. Va., on September 13 and 14. The meetings are conducted under the leadership of Herbert Fitzpatrick, vice-president and general counsel, with John C. Dice, assistant vice-president, as chairman. Formerly they have been held for only one day, but this year's session was of two days' duration. There were approximately 250 guests present, including members of the public relations committees from each county traversed by the railway, officers of the company, their wives and guests from other railroads.

Among the subjects discussed by the speakers were: The Creation of Good Will (by J. W. King, general superintendent of transportation); Federal Taxes (by E. H. Thomas, comptroller); State Taxes (by S. L. Merriam, counsel, Pere Marquette, and W. J. Conaty, tax commissioner); A Competing Form of Transportation (by R. S. Marshall, vice-president, and L. W. Horning, attorney for the Indiana railroads); The Value of Public Relations (by R. A. Van Orsdel, general counsel, Chesapeake & Potomac Telephone Co.). The address of welcome was delivered by State Senator F. W. Tuckwiller, followed by a speech by President W. J. Harahan.

Following these addresses there were detailed reports from each county public relations committee on taxation, government ownership, state legislation, federal legislation, and passenger and freight solicitation. On the second day system-wide committees on each of these subjects reported, following which their reports were discussed under the leadership of J. M. Fitzgerald, vice-chairman, Committee of Public Relations of the Eastern Railroads.

At the dinner on the evening of September 13 the speaker was Dr. Francis Pendleton Gaines, president of Washington and Lee University, who dwelt upon the "Utopian urge" which seems to be actuating some of the leaders in public life today. Following the address a sound film was shown depicting the history of the Chesapeake & Ohio from colonial times down to the present day. (This film, prepared under the direction of L. C. Probert, vice-president, is available for showing to employee and other groups which may be interested, on the railway or elsewhere.)

Among the officers of the railway and guests from other railways in attendance, besides those already mentioned, were the following: G. D. Brooke, vice-president; W. G. Black, vice-president; C. S. Lake, assistant to the president; J. W. Davin, assistant to the president; H. F. Lohmeyer, secretary and treasurer; W. C. Hull, assistant vice-president; J. P. Parrish, assistant vice-president; C. C. Michie, assistant secretary; Norman Call, president of the Richmond, Fredericksburg &

Potomac; Colonel W. S. Battle, Jr., vice-president, retired, and S. F. Small, vice-president, Norfolk & Western; Milton W. Harrison, president, Security Owners' Association; General J. L. Hines, U.S.A., retired; George A. Kelly, vice-president, the Pullman Co.; W. J. Stevenson, general solicitor, Nickel Plate; Colonel H. E. Stevenson, special assistant, Pennsylvania; G. R. James, general attorney, Erie; Seward L. Merriam, counsel, Pere Marquette; John C. Shields, general solicitor, Pere Marquette; L. I. Tefft, tax commissioner, Pere Marquette; Clarence R. Dugan, assistant to vice-president, New York Central; F. M. Rivinus, general solicitor, Norfolk & Western.

Great Lakes Regional Board

The Great Lakes Regional Shippers' Advisory Board will hold its next meeting at the Book-Cadillac Hotel, Detroit, Mich., on September 25. Besides the usual reports of commodity committees, with estimates for the coming quarter, there will be an address by Colonel R. S. Henry, assistant to the president of the Association of American Railroads, on the current transportation situation.

Efficiency Lectures in Brief

A well-known feature of the Operating department organization of the Canadian Pacific, the "Educational Bulletin," issued by the general superintendent each month telling of the merits and demerits recorded for the preceding month, affords room also for footnotes on various matters. Following are three of these notes from the Bulletin of the Algoma district, dated September 1:

"Safety and courtesy, if practiced consistently, become a habit and a worthwhile habit.

"Personality, neatness in appearance and uniform, and general deportment of those employees whose duties demand public contact, will greatly increase our railway's popularity.

"Mutual helpfulness pays—the value of team work is well known. Study harmony and a willingness to help the other fellow by hearty co-operation."

Court to Decide on Rebuilding of F. E. C. Line

Whether or not the overseas line of the Florida East Coast between Miami, Fla., and Key West, which was damaged in the recent hurricane, will be rebuilt is a question to be decided by the court after its consideration of reports from the Florida East Coast receivers. It has been estimated that damage to the F. E. C. during the hurricane of September 2 will approximate between \$2,500,000 and \$3,000,000. The section most affected is from Tavernier to Pigeon Key, with approximately 95 per cent of the damage between Snake Creek and Grassy; approximately 42 mi. are seriously damaged, with lesser damage at either side of this long stretch where the storm hit with the greatest violence. If an order to rebuild is given, it has been estimated that it would take from six to eight months to rehabilitate the line completely.

Economists Assigned to Merger Study in Canada

Bennett promises expert report on all forms of transport, referendum to follow

Another study or investigation is Premier Bennett's solution now for the pressing railway problem. In a federal election campaign speech delivered in Toronto last week-end and broadcast over a nation-wide hook-up the Conservative leader declared he would submit this question immediately to the Economic Council, a so-called "Brain Trust" composed of eminent economists in the civil service at Ottawa, and that if that Council recommended amalgamation of the Canadian Pacific and Canadian National as the way out he would submit this proposal to the people in the form of a referendum.

Ever since it was announced, a short time ago, that Premier Bennett would make an important statement at the opening of his election campaign tour on the railway question many were led to expect he would pronounce favorably upon the ticklish proposal of amalgamation. In fact, Hon. Henry Stevens, a former Cabinet colleague and now leader of the newly-formed Reconstruction party, predicted a short time ago that Mr. Bennett would declare in favor of amalgamation. Mr. Bennett's declaration of policy at Toronto, however, was a disappointment to those political foes who were hoping he would fall into what they regard as a trap, as well as to heads of the privately-owned railway, the Canadian Pacific, whose chairman and president, Sir Edward Beatty, has for two or three years conducted a campaign for amalgamation.

Premier Bennett spoke on the transportation problem in part as follows:

"In no country in the world are the costs of transportation of greater account in the question of agriculture's prosperity, than in Canada. For there is no country whose produce has to travel greater distances to its markets. A modern and efficient transportation system is vital to our welfare.

"It has been in many ways entertaining to read and listen to debates in all sections of the country, as to how we should dispose of our railway problem. And I hope that the orators who have regaled themselves and you with an expression of their view will forgive me for saying that, in the main, they have shown surprisingly little knowledge of the fundamental question involved. Instead of beginning at the beginning of the question, they have begun at the end of it. They have talked about amalgamation, and whether amalgamation should be under public or private auspices. Now I believe that, to everyone who has thought about this matter, the first questions which come to mind are something like these: What, essentially, is the matter with the railways? Are they obsolete in equipment or service? Is there too much competition, too much duplication, too much waste, too much debt?

"Certainly there is too much debt.

"Is there too much competition? When

we talk of competition, we are accustomed to think of competition between our two great railway systems. But today we must look at competition in another way—the competition of the highways, of the automobile, of air transport, with the railways. We must, in short, before we can deal with the narrower question of railway transportation, deal carefully with the broader question of general transportation. It has, of course, occurred to you that, in the last ten or fifteen years, increased employment of the automobile, both passenger and freight, made possible by vast improvement in our highways, has seriously cut into the business of the railways. It has occurred to you that, in the next few years, aviation, as a passenger carrier, a mail carrier—a freight carrier, possibly—will cut seriously into the business of the railways. And it has occurred to you also that the amazing modernization of rail services going on in wealthier countries than Canada has made parts of our system and parts of our equipment relatively obsolete and non-competitive; new motive power, electrification, Diesel engines, air cooling systems: These others have, but not we.

"What are we to do about this? In recent years we have had two inquiries into our railway situation, and they have resulted in real benefit to the country. Now we reach a further stage where we must first of all review the whole problem, not as a political one, or as a sectional one, not as one to be determined on the basis of public ownership or private ownership, but as a problem which can never be solved until a great general scheme is worked out covering all aspects of transportation.

"When we have done that, when we have decided upon such a scheme, we may then require our aviation services to conform to it. We may then control and regulate our road transportation services, so that they will fit into this scheme; and modernize and recast our railway services, so that they will also have their proper place in it. Then, and only then, can the question of amalgamation arise. Therefore, this whole transportation and communication problem must be reviewed again, and from the beginning, in the most impartial and thorough-going fashion. This is a task for which the Economic Council, in theory and in fact, is eminently suited. And the Economic Council will be charged with it. The findings of the Economic Council, as soon as they are made, will be examined by this Government, and thereafter Parliament will be invited to pass appropriate legislation to make effective the changes, the decrease in debt, the decrease in expenses, and so on, that they may recommend.

"If, among the other recommendations, the Economic Council recommends any form of amalgamation of the railways, I will tell you where I stand. Before Parliament is asked to give effect to any such recommendation, the government will submit the recommendation to the people for their directions. We will take no step whatever until we have a clear and definite mandate of the people of Canada, who, after all, are the shareholders of our national railways."

Safety Education in Schools

The Central of Georgia, as one of its regular monthly advertisements in weekly newspapers along the company's lines, announces that its educational campaign in the schools along the road is now being carried on, and with improvements over former years. This road has engaged in this educational work for five years past. The lines extend through 84 counties in Georgia, Alabama, Florida and Tennessee, and officers of the company are to give lectures and other service in every one of these counties. Letters are being sent out inviting the co-operation of the school board (in every county) and other officers interested.

Would Divide C. N. R. Into "Zones"

H. H. Stevens, leader of the newly formed Reconstruction party in Canada, advocated last week in New Brunswick a "zone" system for the operation of the Canadian National. Territory traversed by the Canadian National, he pointed out, is separated by sparsely-populated areas between the Prairies and the Central provinces and again between Ontario and Quebec, and the Maritimes.

Why, therefore, he asked, should not each district, thus divided from the others, be given a large measure of autonomy in its territory? By so doing, men familiar with problems peculiar to their particular districts would be in rather complete authority in each zone. Insofar as possible, purchases in each zone would be made from local industries.

Freight Damage Shows Increase

Freight loss and damage payments during the first six months of 1935 increased 6.9 per cent, as compared with the same period in 1934, or from \$7,960,214 to \$8,510,291, according to figures compiled by the Freight Claim division of the Association of American Railroads. Loss and damage to fresh fruits, melons and vegetables amounted to \$2,483,169, as compared with \$2,326,987 last year, an increase of 6.8 per cent. Claims received totaled 851,493, as compared with 825,058 in the first half of 1934, and 41,448 claims were reopened in 1935, as compared with 30,646 in 1934. Of the 881,096 claims paid, declined or withdrawn during the first six months of 1935, 76.8 per cent were settled within 30 days, 14.5 per cent between 30 and 90 days and 8.7 per cent after 90 days.

Favors New York Freight Tunnel

Two committees of the Chamber of Commerce of the state of New York have submitted an interim report favoring conditionally the construction of the proposed cross-bay union freight tunnel from Bay Ridge (Brooklyn) to Greenville, N. J. The report, which was prepared by the committees on harbor and shipping and public service, will be acted upon at a meeting of the Chamber on October 3. The proposed resolution would favor the tunnel as a benefit to commerce provided that the estimated revenues to be derived from its use will be sufficient to meet interest, amortization and other charges incident to its cost and operation.

The Port of New York Authority, which

recently held a public hearing on the project, contemplates a toll charge for the use of the tunnel on a basis of \$2.50 per car round trip.

Combination Railroad and Bus Tickets for Commuters

As a means of encouraging the use of railroad service into Chicago, combination railroad-motor coach commutation tickets are being sold which enable patrons to use railroad trains into Chicago and Chicago Motor Coach Company vehicles from terminals to various points in the downtown district. Holders of Chicago, Burlington & Quincy 25-ride, 46-ride or 60-ride commutation tickets may purchase 25-ride and 46-ride motor coach tickets at the rate of 7 cents a ride, the motor coach tickets being good between the Union Station and points in the area bounded by Canal street, Madison street, Wabash avenue and Adams street. On the Chicago & North Western, 25-ride and 54-ride bus tickets are sold in connection with the sale of the corresponding railroad commutation tickets at 7 cents a ride and are honored in the district bounded by North avenue, Cermak road, Weston avenue and the lake.

Long Diesel Locomotive Run

What is believed to be "the longest run ever made by a heavy, Diesel-powered train of standard all-steel equipment" was recently completed over the Baltimore & Ohio by the twin unit Diesel-electric locomotive built by the Electro-Motive Corporation for test service on American railroads. The run was made from Jersey City, N. J., to St. Louis, Mo., a distance of 1,114 miles, after which the locomotive, following a two-hour stop, continued from St. Louis with a regular Alton train to Chicago for an additional run of 284 miles.

On the run from Jersey City to St. Louis the locomotive hauled ten standard steel cars, or an average of 757 tons; between St. Louis and Chicago 12 cars were hauled, or an average of 808 tons. The locomotive itself, which weighs 250 tons, is described in a Baltimore & Ohio statement as "the most powerful of its type yet placed in road service in this country." It consists of two 1800 hp. units of identical construction, each of which can be operated separately on lighter trains. When operated together the two units are controlled by one engineer.

Montreal Seeks to Tax Express Trucks

That railway express services are extraterritorial of the City of Montreal, extend beyond the Province of Quebec and throughout the Dominion of Canada, and are governed by special Dominion legislation which puts express tariffs under the Dominion Board of Railway Commissioners, was one of the reasons advanced in recorder's court at Montreal last week by the Canadian Pacific Express Company for its opposition to Montreal's efforts to brand railway express trucks as "common carriers" and subject each to an annual \$15 tax.

The British North America Act, it was argued before Recorder-in-Chief Amedee Thouin, clearly relegates railway services and interprovincial transportation to Fed-

The NEED for MODERN POWER

Increases as Traffic Increases



The railroads making the best returns are those producing the highest net tons per mile of road per day.

Modern power increases the gross-ton-miles per train hour 25% to 30% as compared with locomotives built ten or more years ago.

The greater the gross-ton-miles per train hour, the greater the return on the investment, not only on the locomotive itself, but on the entire transportation plant.



LIMA LOCOMOTIVE WORKS, INCORPORATED, LIMA, OHIO

eral jurisdiction, and for this reason Montreal taxation is ultra vires.

This is a test case, made to decide as to whether or not trucks of express companies—the C. P. Express, the C. N. Express and the Railway Express Agency—are “common carriers” within the meaning of the by-law. Further hearings will be held.

Atlantic States Shippers' Board

The Atlantic States Shippers' Advisory Board will hold its next meeting at the Seneca hotel, Rochester, N. Y., on Thursday, October 3. The meeting will be addressed by Donald D. Conn, executive vice-president of the Transportation Association of America, on the workings of that organization; and the Motor Carriers' Act, recently passed by Congress, will be brought before the meeting in an address by Professor Raper of the College of Business Administration, Syracuse University.

Among the committee reports to be discussed by the meeting are those on:

Extension of store door service in the Rochester area.

Proposed ten per cent increase in rates when freight is shipped in containers, etc.

Simplification of tariffs.

Laxity of carriers in notifying shippers of failure to collect freight charges.

Establishment of joint inspection agency for all commodities except perishables.

There will be a special luncheon given under the auspices of the Rochester Traffic Club and Rochester Chamber of Commerce which will be addressed by Harper Sibley, president of the United States Chamber of Commerce.

Santa Fe May Shorten Schedule of "Chief"

As a result of the success of tests of its new Diesel electric locomotive in hauling the “Chief” between Chicago and Los Angeles, Cal., the Atchison, Topeka & Santa Fe may reduce the schedule of the train 12 hours. Such a schedule is now under preparation and a preliminary round trip on this basis probably will be made within a few days.

The 3,600-hp. locomotive, which is to be one of a fleet that will normally haul the Chief, gave a practical demonstration of its ability to accelerate quickly, to negotiate curves, and other road checks on its trial run from Chicago to Los Angeles and return, which was completed on September 16. On this 4,500-mile trip, it hauled nine passenger cars weighing about 720 tons. On the westbound trip the train attained a speed of 111 miles an hour west of Goffs, Cal., and eastbound it traveled at 110 miles for two miles between Flagstaff, Ariz., and Winslow. It covered the 450 miles from Kansas City to Chicago in 8 hr. 27 min., or an average speed of 53.2 miles an hour.

Senate Committee Investigation of Railroad Finance

Approximately 50 persons are now engaged for a sub-committee of the Senate committee on interstate commerce in preliminary work in connection with the investigation of railroad financial transactions authorized by the resolution which Senator Wheeler put through the Senate

Highways Used Commercially Should Yield a Commercial Return

The highways of this country were not constructed as transcontinental freight or passenger routes. They won't stand up under such traffic. Mile after mile of highway is ruined by traffic that the railroads should be handling. There isn't any reason why buses bound for Los Angeles should go thundering along Pennsylvania highways. Transcontinental bus license fees may seem high—but they are not high enough to recompense the public for the damage done.

As for the long-haul freight—it should be ordered from the highways forthwith. The long haul freight people say they are paying their way when they use the state's highway system. That, of course, isn't so. State roads are following railroad precedent. They are not earning enough to pay for replacements. The fact should not be forgotten that taxpayers generally made the original investment in the highways. Cambria county, for example, invested several million dollars in good roads. Under a common sense system, highway earnings should be sufficient to carry that debt. But the taxpayer, generally, is still footing the bills—with the freight and passenger lines using the roads.

Florida seems to be one of the few states which makes its highway system not only pay its way but also pay dividends. That is as it should be. All of the people should not be required to provide freight and passenger transportation facilities for a few of the people. If the highways are to be used commercially they should be made to pay a commercial dividend.

From the Johnstown (Pa.) Democrat

at the last session. They are working under the direction of Max Lowenthal, counsel for the committee, and are understood to be centering their attention at first on the Chicago, Milwaukee, St. Paul & Pacific and the Missouri Pacific, which have filed reorganization plans with the Interstate Commerce Commission. Most of those now engaged are from the staffs of the commission and of the investigation section of the Public Works Administration and they are utilizing commission records as to past financial transactions of the companies. As there are 18 railroads or systems in the list recommended to the committee by Co-ordinator Eastman for investigation it is not expected that the committee will be ready to hold public hearings for a long time.

Cotton Belt Publishes Analysis of Automobile Industry

The St. Louis Southwestern has recently published a brochure in which are set forth results of an analysis of the

automobile industry made by the road's director of research and service. From charts upon which are plotted various trends in the automotive industry it is estimated that “under any reasonable revival of business activity” the replacement demand following 1937 will bring a period of annual sales above the 1929 peak.

A similar situation prevails in a large number of basic industries, the analysis also points out. It adds in this latter connection that “at no time in the country's history has there been such an accumulation of deferred buying by individuals, families and industry. With bank deposits within 82 per cent of the all time high record, ample funds are available. If public psychology can be imbued with confidence in the future and should the country be allowed to adjust its economic condition without undue political interference it would appear that good grounds exist for believing the greatest period of prosperity which this country has ever experienced lies definitely ahead at the present time. This conclusion is based upon the assumption that both national and international tranquillity will continue.”

'Tis a Crime to Take a Chance, if—

Circular Number S-456, issued by the Committee on Education, Safety Section, Association of American Railroads, for the month of October, warns against taking chances *for which you are not willing to pay*, and is illustrated by a half dozen pictures, showing the sad results of various kinds of carelessness. Such conduct is characterized as “crime,” and is compared to certain crimes of violence.

The circular is addressed to foremen and to different classes of workmen, with frequent challenges to consider whether certain common risks would be taken “if you knew that you would have to pay for the result of the chancetaking.”

This circular divides mistakes made by railroad men into acts of commission and acts of omission; and, as to the latter, is addressed more particularly to officers. Emphasizing its points, it says that railroad officers are rarely guilty of acts of commission in this field; but on the other branch of the question four points are specified, as follows:

The officer omits training his men for safety and they do not understand safe methods; omits enforcement of rules and instructions and his men form the habit of violating them; omits a study of accident causes and fails to recognize them in advance of an accident; omits to apply prompt remedies and his men continue to work amid unsafe conditions and dangerous practices.

Club Meetings

The Toronto (Ont.) Railway Club will hold its next meeting at the Royal York Hotel, Toronto, on Monday evening, September 23. W. S. Emery, Canadian Pacific, will speak on electric communications.

The Railway Club of Pittsburgh (Pa.) will hold its next meeting at the Fort Pitt Hotel, Pittsburgh, on Thursday evening, September 26. C. H. R. Howe, Cost engineer, Chesapeake & Ohio, will present a

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Why

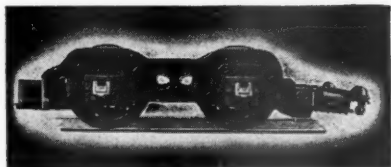
CARRY AN UMBRELLA ALL THE TIME ?

Why carry an umbrella all the time when it only rains occasionally?

Using excess main cylinder size just to start and accelerate the train is just as useless because their extra capacity is needed only about 10% of the time.

Smaller cylinders have ample capacity after the train is rolling and The Locomotive Booster provides the additional power needed for starting, accelerating and over heavy grades.

Booster locomotives cost less for repairs because the combination of smaller main cylinders, with the Booster to attain the desired power when needed, makes it possible to reduce the piston thrust of the main cylinders which in turn reduces maintenance costs.



Franklin repair parts use jigs and fixtures that insure interchangeability, long life and dependability of service. Genuine Franklin parts are a guarantee of maximum trouble-free service.

FRANKLIN RAILWAY SUPPLY COMPANY, INC.

NEW YORK

CHICAGO

MONTREAL

paper on The Use of Motion Pictures in the Promotion of Standard Practices in Handling Track Work and Roadway Equipment.

The New England Railroad Club will hold its next meeting at the Copley-Plaza Hotel, Boston, on Tuesday evening, October 8. Horatio S. Rubens, president of the Consolidated Railways of Cuba, will present a paper on Railroading in Cuba.

The Traffic Club of Baltimore (Md.) will hold a "Motor Truck Night" on October 1 at the Lord Baltimore Hotel in that city. This meeting, which will be held in co-operation with the Maryland Motor Truck Association, will be addressed by J. L. Keeshin, president of the Keeshin Motor Express Company, Chicago. Former-Governor Albert C. Ritchie of Maryland will act as toastmaster.

President Approves Program for Grade Crossing Elimination in Alabama

The President has approved a program involving \$1,342,010, previously apportioned by the Secretary of Agriculture to Alabama, for the elimination of hazards at grade crossings in 9 of 67 counties in the state. The total apportionment to Alabama under the \$200,000,000 allocation for grade crossing elimination projects in the 48 states is \$4,034,617. This allotment leaves a balance of \$2,692,607 to be covered by later applications.

The funds are to be applied to the following classes of projects, as defined in the approved rules and regulations governing such expenditures:

One project on federal-aid highway system outside of municipalities, involving reconstruction of one existing grade separation structure at an estimated cost of \$51,020.

Eight projects within municipalities on extensions of the federal-aid highway system, involving reconstruction of one existing grade separation structure and the elimination of thirteen grade crossings by the construction of seven grade separation structures, at an estimated cost of \$923,340.

Two projects within municipalities not on extensions of federal-aid highway systems, involving the elimination of four grade crossings by the construction of two grade separation structures at an estimated cost of \$226,700.

Three projects on secondary or feeder roads outside of municipalities, involving the reconstruction of one existing grade separation structure and the elimination of one grade crossing by the construction of one grade separation structure and the construction of a portion of a grade separation structure at the Mobile & Ohio crossing in Montgomery, the remainder of which is to be constructed as a WPGM project, at an estimated cost of \$140,950.

International Chamber Passes Resolution on Rails and Roads

The International Chamber of Commerce, at its eighth general Congress in Paris on June 24-29, adopted a resolution embodying principles which should govern public authorities in their development of land transportation. These principles are as follows:

1. Co-ordination between road and rail will avoid excessive competition, which involves disastrous consequences for both forms of transport.

2. The total means of transport offered to the public should not exceed the real needs of business, and a division of traffic between rail and road transport should be arrived at suited to their respective technical characteristics.

3. The adjustment of transport capacity to requirements and the division of traffic should be carried out, whenever possible, by means of agreements between the interested parties, or by means of arbitration voluntarily organized by the representatives of the two forms of transport.

4. The levying of taxes on one of the forms of transport for the sole purpose of limiting its use cannot bring about a rational and fair division of traffic.

5. The International Chamber of Commerce, in view of the conditions which must be fulfilled by the organization of railway and road transport in order that the latter may meet the needs of business as effectively as possible, considers that:

(a) Certain regulations and obligations imposed on the railways should be relaxed.

(b) It is not at present practicable to disturb the existing railway rates structure, for to abandon these principles would deprive trade of an essential element of stability. It should be made elastic, in particular by the adoption of contract rates guaranteeing equal treatment for all in equivalent conditions.

(c) The railways should be allowed to abandon wholly or in part lines and services run at heavy loss.

(d) The principle according to which each means of transport should enjoy as much liberty as is consistent with the safety and convenience of the public should apply to automobile transport; the chief characteristic of automobile transport is its flexibility, and it is desirable to adopt a form of regulation permitting the public to obtain the maximum benefit from that flexibility.

(e) Genuinely private automobile traffic should be free.

(f) Public automobile transport should be required to offer a certain number of guarantees and should be subjected to the regulations necessary for the organization of transport.

(g) They should also be subjected to certain regulations concerning dimensions, weight, maintenance, insurance against third party risks, working conditions and driver's license.

(h) Automobile transport undertakings operating as public carriers should publish tariffs which should not discriminate between users.

(i) Collaboration between railways and road transport, especially on mixed routes which follow successively the railway and the road, is desirable.

(j) The statistics required from railways and automobile transport should be limited to those necessary, in the first place, to ensure that they are operated in accordance with the prescribed measures of co-ordination; and, in the second place, for the purpose of general economic statistics concerning traffic movements.

Equipment and Supplies

LOCOMOTIVES

THE NORFOLK & WESTERN is building two new Mallet type freight locomotives in its shops at Roanoke, Va.

THE UNITED FRUIT COMPANY has ordered one locomotive of the 2-8-2 type from the Baldwin Locomotive Works. This locomotive is for service in Cuba. Inquiry for this equipment was reported in the *Railway Age* of July 27.

FREIGHT CARS

THE NORFOLK & WESTERN has ordered 10 new all-steel covered hopper cars of 50 tons' capacity, to be built in its Roanoke, Va., shops. These cars are for use in handling in bulk such shipments as cement, lime, etc.

THE ATCHISON, TOPEKA & SANTA FE is rebuilding 150 refrigerator cars which now have steel underframes and wooden superframes. The rebuilt cars will have both steel underframes and steel superframes and improved insulation, the cost of reconstruction being \$1,935 a car.

PASSENGER CARS

THE ST. LOUIS-SAN FRANCISCO will build two lounge cars in its own shops.

IRON AND STEEL

THE CHESAPEAKE & OHIO is considering the purchase of 21,000 tons of rails.

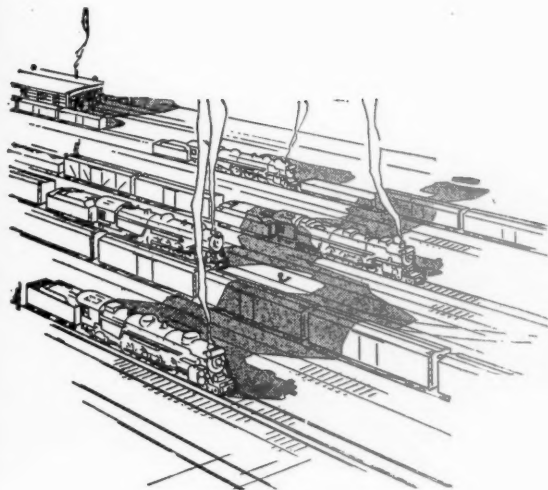
THE CENTRAL OF NEW JERSEY received bids on September 20 for 600 tons of steel for a bridge at Newark, N. J.

NEW YORK CENTRAL.—This company has applied to the Public Works Administration for an additional loan of \$457,000 for the purchase and laying of 7,400 tons of rail and appurtenances.

THE STATEN ISLAND RAPID TRANSIT RAILWAY COMPANY, a subsidiary of the Baltimore & Ohio, will receive bids until 11 a.m., Eastern Standard Time, September 27, at the office of the chief engineer, Baltimore, Md., for 510 tons of structural steel for six bridges, to be built in connection with grade crossing elimination work at Tompkinsville-Stapleton, Staten Island, N. Y.

THE NEW YORK CENTRAL SYSTEM has placed contracts for 6,500 tons of new rail and angle bars, together with track fastenings and accessories, for use during the balance of 1935. The purchase was divided among the following companies: Bethlehem Steel Company, Illinois Steel Company, Inland Steel Company, Algoma Steel Corporation, Ltd., Republic Steel Corporation; Jones & Laughlin Steel Corporation, Youngstown Sheet & Tube Company, P. & M. Company, Wheeling Steel Company, Illinois Malleable Iron Com-

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ECONOMICAL EFFECTIVE FUEL COMBUSTION

Is Their Objective

Whether the locomotives are large modern power or of an older type the main objective of American Arch Company service engineers is to aid in improving steaming capacity and in economical use of fuel.

These engineers have spent lifetimes in study and research of locomotive combustion. Many combustion difficulties arising from causes other than locomotive arches have been overcome thru the sound advice of these combustion experts.

They are at the service of the railroads to aid in developing full boiler capacity with minimum fuel consumption.

*There's More to
SECURITY ARCHES
Than Just Brick*

**HARBISON-WALKER
REFRACTORIES CO.**

Refractory Specialists



**AMERICAN ARCH CO.
INCORPORATED**

***Locomotive Combustion
Specialists*** * * *

pany, Weirton Steel Company, Creepcheck Company, Inc., American Fork & Hoe Company.

MISCELLANEOUS

THE AMERICAN RAILROAD OF PUERTO RICO has placed an order with the Timken Roller Bearing Company for bearings and boxes to equip the journals of two passenger cars.

THE AMTORG TRADING CORPORATION has placed orders for 14,000 freight car axles totaling 4,500 tons. The orders were equally divided between the Carnegie Steel Company and the Bethlehem Steel Company. These axles are for service in Russia.

THE SKF INDUSTRIES, INC., Philadelphia, Pa., will furnish the bearings for the motors of the 15 articulated, five-section train units now being built by the Pullman-Standard Car Manufacturing Company for the New York Rapid Transit Company (B-M-T). These cars are to be equipped with General Electric motors on which 180 sets of SKF bearings will be used. Ten additional trains ordered from the St. Louis Car Company are also to be SKF equipped on motors. These cars will have Westinghouse motors on which 120 sets of SKF bearings will be used.

Construction

CHICAGO, ROCK ISLAND & GULF.—The trustees have applied to the Interstate Commerce Commission for a certificate authorizing the construction of a new line of 4 miles from Sunray, Tex.

THE NEW JERSEY BOARD OF PUBLIC UTILITY COMMISSIONERS will hold public hearings on September 26 at 1060 Broad street, Newark, N. J., to determine whether about 20 grade crossings in New Jersey shall be eliminated on the following roads: Central of New Jersey, 1; Delaware, Lackawanna & Western, 3; Erie, 2; Lehigh & Hudson River, 4; Lehigh Valley, 3; Pennsylvania, 3; Pennsylvania-Reading Seashore, 3; Reading, 1.

TERMINAL RAILROAD ASSOCIATION OF ST. LOUIS.—The voters of St. Louis, Mo., have approved the issuance of \$800,000 in bonds to pay for the completion of the railway approaches to the St. Louis Municipal bridge across the Mississippi river. The city expects to receive an additional \$333,900 in the form of a grant from the Public Works Administration, which also is to be used in the construction of the railroad approaches to the bridge. The proposed work will include the finishing of the East St. Louis (Ill.) Union Station approach to the bridge, the erection of a Southern Valley Junction approach at Nineteenth street in East St. Louis, and, in St. Louis, the construction of a connection with the tracks of the Terminal Railroad Association at Seventh and Gratiot streets and one with the tracks of the Missouri Pacific and the St. Louis-San Francisco at Twelfth street.

Supply Trade

The Fansteel Products Company, Inc., North Chicago, Ill., has changed its name to the Fansteel Metallurgical Corporation.

Frank Liebich of the industrial sales division of the Harnischfeger Corporation, Milwaukee, Wis., has been appointed district manager in charge of operations in the Detroit area.

B. C. Wilkerson and Trent Mays, 360 Maryland avenue, Portsmouth, Va., have been appointed sales representatives in the Norfolk area for Jenkins' dust guards, a product of the George O. Jenkins Company, Bridgewater, Mass.

J. P. Distler, general manager of sales of the Keystone Steel & Wire Company, has been appointed manager of sales, wire division, Republic Steel Corporation, with headquarters in Chicago, to succeed R. W. Hull, whose duties as assistant manager of sales for all Republic products in the Chicago district will now receive his entire time.

E. G. Goodwin, until recently connected with the Standard Coupler Company, New York, is now associated as chief engineer with the Graham-White Sander Corporation, Roanoke, Va. For several years preceding his association with the Standard Coupler Company Mr. Goodwin was connected with the mechanical department of the Norfolk & Western.

OBITUARY

William H. Hunter, western manager of the Pratt & Whitney Company, with headquarters in Chicago, died in Cleveland, Ohio, on September 11.

George B. Howard, vice-president, secretary and treasurer of Crerar, Adams & Co., Chicago, died in Minneapolis, Minn., on September 10. He was born in St. Charles, Ill., in 1865, and entered railway service in the financial department of the Illinois Central. Later he served with the Chicago, Burlington & Northern (now the Chicago, Burlington & Quincy) and the Atchison, Topeka & Santa Fe as assistant to the treasurer. In 1893, he entered the employ of Crerar, Adams & Co. as cashier, which position he held until 1915, when he was made secretary and treasurer. On August 21, 1922, he was elected vice-president, secretary and treasurer, which position he held until his death.

Clive Runnells, vice-president of the Pullman Company, Chicago, died in Santa Barbara, Cal., on September 12. He was born in Des Moines, Iowa, on September 10, 1877, and after four years at Harvard University entered business in Chicago in 1900, being successively with the Chicago Junction Railway, the Pere Marquette, the Western Steel Car & Foundry Company, McCord & Co., the American Car & Foundry Company and a partner in the stock brokerage firm of Babcock, Rushton

& Co. In 1915, he became assistant to the president of the Pullman Company, his father, and later was made a vice-president also. With the segregation of the manufacturing and operating units, he became a vice-president of the Pullman Car & Man-



Clive Runnells

ufacturing Corporation, later returning to the Pullman Company in the same capacity. For the last few years he made his home at Santa Barbara because of poor health.

Roscoe W. Cost, transportation lighting engineer of the Westinghouse Lamp Company, died in East Orange, N. J., on September 3, of a chronic disease of the lymphatic gland system. Troubled for a number of years by this disease, Mr. Cost took a leave of absence from his work in December, 1934. Born in Hagerstown, Md., in February, 1893, Mr. Cost, after early education there, attended George Washington University in Washington, D. C. He completed his college education at Carnegie Institute of Technology in 1916, graduating with a bachelor of science degree in industrial engineering. In the same year, he started his career with the Duquesne Light Company in Pittsburgh,



Roscoe W. Cost

Pa. Later he was employed respectively by the Westinghouse Electric & Manufacturing Company, the Jones & Laughlin Steel Company, an electrical jobbing firm, and the Westinghouse Lamp Company in Bloomfield, N. J. During the World War,

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*Waste Exhaust Steam
Will Preheat and Inject
Boiler Feed Water*

Why not use it?

All the exhaust steam normally goes up the stack and is lost to the atmosphere.

But, through an Elesco exhaust steam injector, a substantial portion of this exhaust steam can be put to work as it is exhausted from the locomotive cylinders. This reclaimed exhaust steam not only will preheat the feed water to near the boiling point—representing fuel and water savings of 8 to 12 per cent—but also will furnish the needed force to inject the feed water into the boiler.

More than 20,000 locomotives throughout the world are equipped with the Elesco type of exhaust steam injector . . . ample testimony to warrant the application of Elesco exhaust steam injectors to your locomotives for improving operating efficiency.

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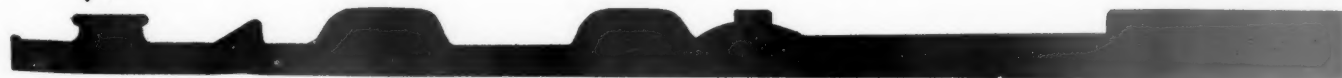


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Exhaust Steam Injectors • Superheater Pyrometers
Superheaters • Feed Water Heaters • American Throttles



he served in the Signal Corps of the U. S. Army at Camp Meade, Md., and was a lieutenant in the Signal Corps at the time of his death. As a member of the American Transit Association, he served as chairman of its committee on lighting of rolling stock. He also served as advisory representative to the committee on illumination of the Association of Railway Electrical Engineers. Many constructive magazine articles and technical papers on various phases of illumination practice in transportation fields came from the pen of Mr. Cost. Late in 1934 he completed an extensive survey of lighting practice in modern streamlined trains. This report was used extensively by railroads in formulating specifications for car lighting.

TRADE PUBLICATIONS

TIGHT-LOCK COUPLERS.—An interesting 28-page booklet, covering O-B tight-lock couplers and automatic train-line connectors has recently been issued by the Ohio Brass Company, Mansfield, Ohio. This illustrated booklet, called Bulletin 612-A, presents in concise form the general construction and advantages of O-B tight-lock couplers. Coupler and train-line connector details, as well as the method of uncoupling, are included. The last few pages of the bulletin contain excerpts from the *Railway Age* issue of May 4, which describe the installation of O-B tight-lock couplers and train-line connectors on the new streamlined Baltimore & Ohio trains, and on the Gulf, Mobile & Northern high-speed three-car non-articulated diesel-electric train.

STEEL BEARING PILES.—This is the title of a 70-page illustrated booklet recently published by the Carnegie Steel Company, Pittsburgh, Pa., which contains comprehensive data concerning this company's CBP sections (steel bearing piles). The subject matter of the booklet includes sections on bearing capacities, driving formulas, driving phenomena, engineering and design, the spacing of piles, splices for piles, caps for piles, driving equipment, installation, handling and driving, test data, bearing values, sustaining values, capacities of CBP sections, elements and safe loads of sections, test methods, corrosion data, corrosion resistance and protection. In addition, the booklet contains drawings and photographs on typical installations and a set of suggested specifications for steel bearing piles.

PROGRESS BULLETIN ON TRACKWORK FIXTURES.—The Ramapa Ajax Corporation, New York, has issued an unusually complete and informative 20-page bulletin describing recent improvements in trackwork fixtures developed by this company to meet the demands of higher speed operation. The bulletin includes improvements in switch stands and switch accessories, frogs, crossings and other trackwork devices. Each of these improvements is illustrated with wash drawings, sketches and "cut away" views showing internal construction, and is accompanied with detailed information designed to make the book of practical reference value.

Financial

BOYNE CITY.—Stock.—The Interstate Commerce Commission has authorized this company to issue 500 shares of common stock without par value, but with an assigned value of \$10 a share, the stock or the proceeds from the sale thereof to be used in acquiring the line of the Boyne City, Gaylord & Alpena, extending from Boyne City, Mich., to Alpena, 92.3 miles. That portion of the line from Boyne Falls to Alpena, 83.7 miles, is to be junked and 7.2 miles between Boyne City and Boyne Falls will be continued in operation by the new company.

CANTON & CARTHAGE.—Abandonment.—This company has applied to the Interstate Commerce Commission for authority to abandon operations over its logging road from Edinburg, Miss., to Burnside, 15 miles.

CHESAPEAKE & OHIO.—Abandonment.—The Interstate Commerce Commission has authorized this company and the Nelson & Albemarle to abandon a part of a branch line extending northeast from Guthrie, Va., to Alberene, 3.9 miles.

CHICAGO & EASTERN ILLINOIS.—Hearing on Reorganization Plan.—Hearings on a reorganization plan for this company were begun at Washington on September 17 before Director O. E. Sweet of the Interstate Commerce Commission's Bureau of Finance. After several postponements the hearing was devoted to a plan presented by the management which had been filed in the federal court at Chicago on September 14 by Kenneth D. Steere, chairman of the board, representing the Van Sweringen interests in the property, and testimony in explanation of and in support of the plan was given by Mr. Steere, Charles M. Thomson, trustee, and R. L. Williams, senior executive assistant. Discussing the proposed treatment of the common and preferred stock Mr. Steere said that it was designed to retain the Chesapeake & Ohio's interest in the property. Opposition to the plan was expressed by Louis B. Wehle, counsel for a committee of general mortgage holders, who characterized it as grossly unfair to the mortgage bondholders, and as including such fundamental elements of injustice as to be prima facie impracticable. The protective committee representing preferred stockholders of the Chicago, Rock Island & Pacific, which has advanced a plan for a consolidation of the Rock Island, the Frisco, and the C. & E. I., was granted leave to intervene in the proceedings.

The proposed plan, which would cut annual fixed charges to less than \$465,000, provides for (1) first consolidated mortgage bonds to be assumed by a new company, maturity to be extended 40 years to October 1, 1974, and interest reduced to 4 per cent; (2) R. F. C. loans of \$5,760,000 to be funded with 4 per cent prior lien bonds, series A; (3) trustee certificates to receive the same treatment accorded R. F. C. loans; (4) Railroad Credit Corporation loan of \$1,871,000 to be funded

with series B prior lien bonds; (5) equipment trust certificates to be assumed by the new company without change; (6) Evansville Belt bonds to be assumed without change; (7) general mortgage bonds to be exchanged par for par for \$30,709,000 of income 5s; (8) preferred stock to be exchanged for common, share for share, without provision for dividends in arrears; (9) common stock to receive one new for each three old shares.

Interest in arrears on the general mortgage bonds and the R. F. C. loans would be paid in common stock at the rate of one share for each \$25 of past due interest, requiring issuance of 39,681 shares. Accrued interest on trustee certificates and the R. F. C. loan would be paid in cash. The plan is based on the assumption of a January 1, 1936, effective date, but interest accruals, etc., would be figured as from April 18, 1933, the date of filing for the original reorganization petition.

CHICAGO, INDIANAPOLIS & LOUISVILLE.—Abandonment.—The Interstate Commerce Commission has authorized this company to abandon a line extending from a connection with its main line at McCoysburg, Ind., to a point 4 miles north of Dinwiddie, 35.9 miles.

CHICAGO, ROCK ISLAND & PACIFIC.—Reorganization Postponement Asked.—Federal Judge Wilkerson in Chicago on September 17 took under advisement the question of postponing the time for filing a reorganization plan for this company from November 1 to February 27. All interests in the case agreed in requesting the extension.

COWLITZ, CHEHALIS & CASCADE.—Notes.—The Interstate Commerce Commission has authorized this company to issue \$55,000 of promissory notes, the proceeds of which will be used to pay taxes, to cover the cost of bridge renewals, and the purchase of land and equipment.

EASTERN TENNESSEE & WESTERN NORTH CAROLINA.—Bonds.—The Interstate Commerce Commission has authorized this company to extend until 1965 the maturity date of \$350,000 of its first mortgage 5 per cent bonds due November 1. There are \$500,000 of these bonds outstanding, \$150,000 of which the company is prepared to pay. The company has offered to bondholders a payment in cash of 30 per cent of the principal of bonds which are deposited under the plan, which is to become operative if the holders of 90 per cent of the issue agree to it.

ERIE.—Bonds.—The Long Dock Company, whose capital stock is owned by, and whose principal properties are leased by this company, is offering holders of its consolidated mortgage 6 per cent bonds due October 1 an opportunity to extend them to 1950 with interest at 3¾ per cent. Holders who deposit their bonds under the plan before October 1 will receive the interest due October 1 plus 1 per cent of the principal of the bonds so deposited. Bonds not so extended will be purchased at principal amount plus accrued interest by Clark, Dodge & Co., New York, if tendered for sale before October 1.

The Interstate Commerce Commission

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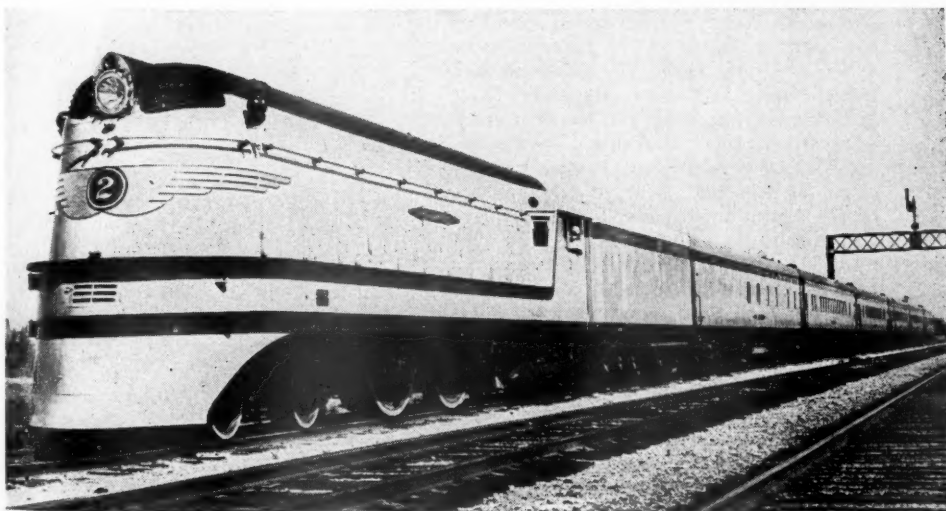
ALCO

HORSEPOWER

The steam locomotive is a direct connected machine. As the speed of the steam locomotive increases, its horsepower increases until it reaches its cruising speed. Here, within a considerable range, it can develop its full horsepower output. (In the case of the "Hiawatha" about 3,000 sustained horsepower.)

In fast schedules — requiring top speeds up to 80 and 100 miles an hour — stops and starts will be few, but slow-downs to 40 and 50 miles an hour may be numerous.

Here is a situation admirably suited to the steam locomotive. In this speed range the steam locomotive has the horsepower needed for quick speed restoration.

AMERICAN LOCOMOTIVE COMPANY**30 CHURCH STREET NEW YORK N.Y.**

has authorized the Long Dock Company to extend these bonds. In its application the company indicated its intention to arrange to pay a commission of 1.75 per cent to bankers who would agree to purchase bonds not extended, and to present them for extension, the percentage to include 1 per cent for bankers' fees and $\frac{1}{2}$ of 1 per cent as commissions for purchasing and presenting bonds for extension.

MERIDIAN & BIGBEE RIVER.—*Trustees' Certificates.*—The Interstate Commerce Commission has authorized the trustee of this company to issue \$240,748 of trustee's certificates, to be delivered to the Reconstruction Finance Corporation in evidence of, or as security for, a loan.

NEW YORK CENTRAL.—*P. W. A. Loan.*—This company has applied to the Interstate Commerce Commission for authority to issue \$4,407,000 of 4 per cent collateral serial notes, of which \$3,950,000 are to be exchanged for a like amount of notes issued to the Public Works Administration now outstanding and \$457,000 are for an additional loan for the purchase and laying of 7,400 tons of rail and appurtenances.

NORFOLK & PORTSMOUTH BELT.—*Note.*—The Interstate Commerce Commission has authorized this company to issue a promissory note for \$67,500 to be given to the National Bank of Commerce of Norfolk, Va., to evidence a loan to meet a maturity of \$68,000 of 4 per cent bonds of the Elizabeth River R. R.

SOUTHERN.—*Abandonment.*—This company has applied to the Interstate Commerce Commission for authority to abandon its Embreeville branch, from Embreeville Junction, Tenn., to Embreeville, 13 miles.

TIONESTA VALLEY.—*Abandonment.*—This company has applied to the Interstate Commerce Commission for authority to abandon the northerly part of its line, from Sheffield, Pa., to Clarendon, 7.19 miles.

WHEELING & LAKE ERIE.—*Prior Lien Dividend.*—The directors of this company on September 17 declared a dividend of \$8.75 a share on the 7 per cent cumulative prior lien stock, arrears which so far have amounted to \$43.75 a share.

YOSEMITE VALLEY.—*Stock.*—The Interstate Commerce Commission has authorized the Yosemite Valley Ry. to acquire and operate the line of the Yosemite Valley R. R. and to issue 2000 shares of no-par capital stock in connection therewith.

Average Prices of Stocks and of Bonds

	Sept. 17	Last week	Last year
Average price of 20 representative railway stocks.	36.96	37.63	33.14
Average price of 20 representative railway bonds.	74.23	74.42	70.90

Dividends Declared

Joliet & Chicago.—\$1.75, quarterly, payable October 7 to holders of record September 25.

Mahoning Coal.—\$6.50, quarterly, payable November 11 to holders of record October 15.

Providence & Worcester.—\$2.50, quarterly, payable October 1 to holders of record September 11.

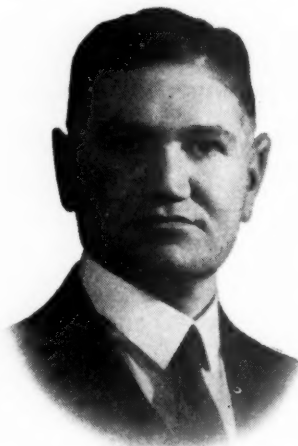
Wheeling & Lake Erie.—Prior Lien, \$8.75, payable September 27 to holders of record September 23.

Railway Officers

OPERATING

Julian Hernandez has been appointed general superintendent of transportation of the National Railways of Mexico, with headquarters at Mexico, D. F., succeeding **David S. Alonso**, who has resigned. **Alberto A. Banuet** has been appointed superintendent of the Southeast division, with headquarters at Tierra Blanca, Ver. C., succeeding **Jose I. Garcia**, who has been assigned to other duties.

Manuel Valdez Orozco, who has been appointed general superintendent of express of the National Railways of



Manuel Valdez Orozco

Mexico, with headquarters at Mexico, D. F., as noted in the *Railway Age* of July 20, was born on January 11, 1889. He entered the service of the Wells Fargo Express Company in 1906 as an express messenger and after serving on various runs he was appointed express agent in 1910, in which capacity he served at several points. Two years later he was appointed cashier for the express company at Tampico, Tam., and in June, 1914, he was placed in charge of the unclaimed express office at Guadalajara, Jal. Later in the same year when the National Railways of Mexico developed its own express organization, Mr. Orozco was engaged as a route agent to transfer accounts from the Wells Fargo Express Company to the railway lines. From 1915 to 1920 he served successively as general express agent at Torreon, Coah., as chief clerk to the general superintendent of express of the Central division, as traveling express auditor at Colima, Col., and Puebla, Pue., as chief clerk to the superintendent of express of the Western division, and as chief traveling auditor with headquarters at Irapuato, Gto. In 1921, he was made superintendent of the Southern division and in the following year, this division having been abolished, he was appointed traveling auditor of District No. 3 of the Western division. In 1933 Mr. Orozco was sent to Mexico,

D. F., as industrial express agent. Later in the same year he was made assistant superintendent at Guadalajara and in 1934 he was transferred to Mexico, D. F., where he was located at the time of his recent appointment.

TRAFFIC

The Birmingham (Ala.) traffic offices of the Baltimore & Ohio and the Alton will, on September 23, be moved from 1209-11 Watts building to Rooms 807 and 808 Transportation building, First avenue and Twenty-second street, North.

William P. Nolden has been appointed perishable freight agent for the Minneapolis & St. Louis at New York, and **Fred H. Holmes** has been appointed perishable freight agent, with headquarters at Los Angeles, Cal.

Harry W. Von Willer, division freight agent of the Erie, with headquarters at Youngstown, Ohio, has been appointed assistant general freight agent, with headquarters at Pittsburgh, Pa., succeeding **Thomas E. McAndrews**, promoted. **Charles A. Stoeber**, general agent at Newark, N. J., has been appointed division freight agent at Youngstown, succeeding Mr. Von Willer. **Arthur R. Walton**, division freight agent at Jersey City, has been appointed general agent at Newark. **James G. Vreeland**, general agent at Milwaukee, Wis., has been appointed division freight agent at Jersey City, succeeding Mr. Walton. **Harry A. Wilson**, foreign freight agent at New York, has been appointed general agent at Milwaukee, succeeding Mr. Vreeland. **William C. Otten** has been appointed foreign freight agent at New York.

William J. Daily, assistant freight traffic manager for the Delaware, Lackawanna & Western, with headquarters at New York, has been promoted to the position of freight traffic manager, with the same headquarters, succeeding the late



William J. Daily

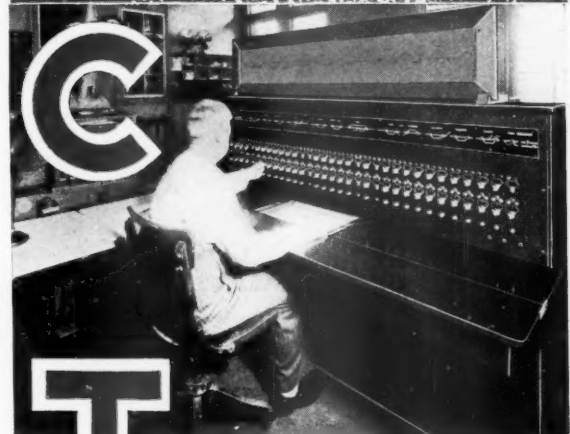
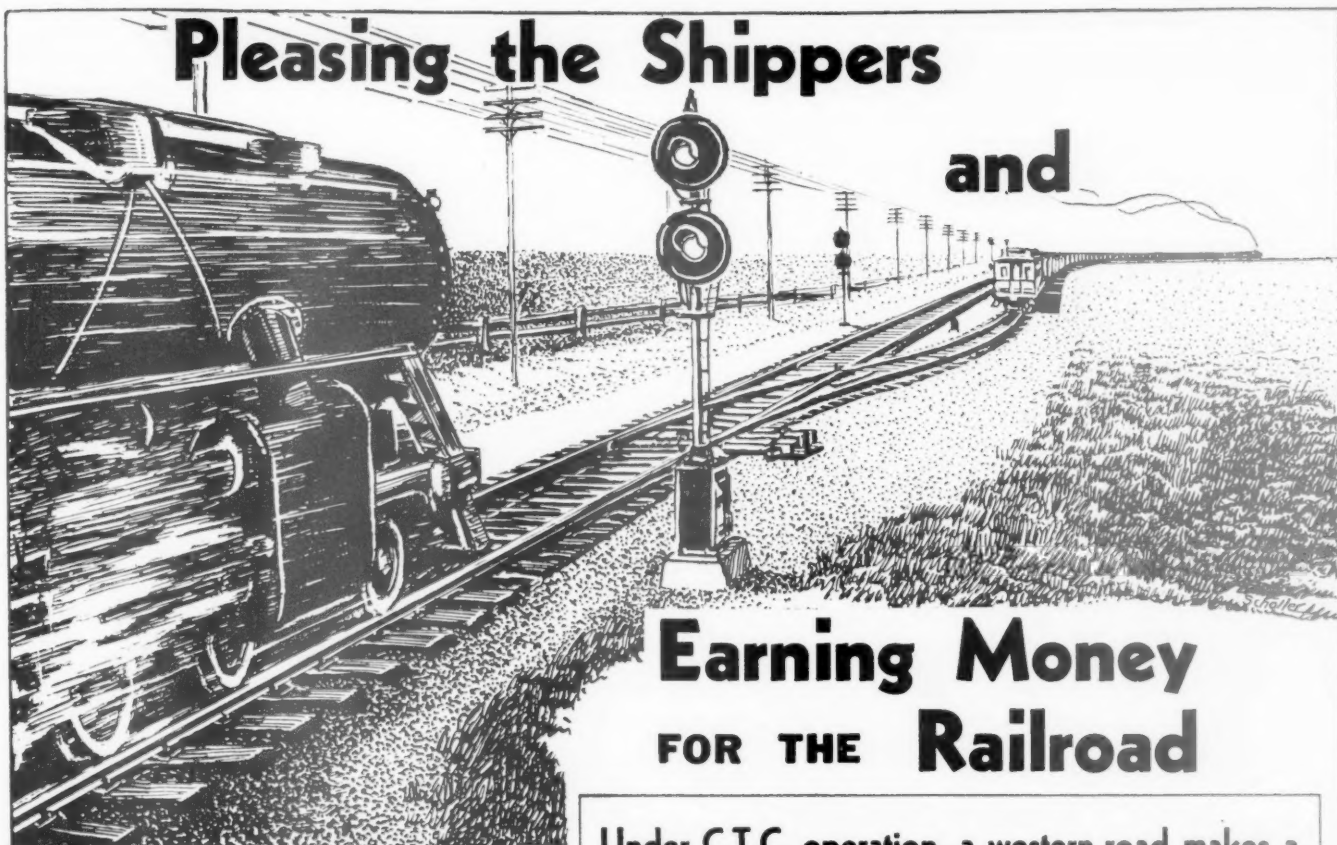
Maurice Williams. Mr. Daily entered the service of the Lackawanna as tariff clerk in 1908. He was promoted to chief clerk in 1919 and to assistant general freight agent in 1926. Mr. Daily was ap-

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Pleasing the Shippers

and

Earning Money FOR THE Railroad



1008

Under C.T.C. operation, a western road makes a move several times weekly that would be impracticable with train orders: » » » » » »

A merchandise extra of 65 cars enters C.T.C. territory 13 minutes ahead of a Limited train. The extra is advanced six stations ahead of this train, where it has work to do. This move saves considerable time for the extra, with no delay whatever to the passenger train. Under the train order method of operation, stopping to head-in would cause considerable delay. » » » » » »

"Operation of C.T.C. is so perfect that delays are avoided daily which could not have been avoided with the train order system," says the Chief Dispatcher, in describing his complete satisfaction with this modern, self-liquidating signal system.

Our nearest district office will be glad to furnish detailed information. » » » » » »

1881

Union Switch & Signal Co.

1935

SWISSVALE, PA.

NEW YORK

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SAN FRANCISCO

pointed general freight agent in June, 1933, and was advanced to the position of assistant freight traffic manager last May.

Charles A. Arentzen, assistant general freight agent for the Delaware, Lackawanna & Western, with headquarters at New York, has been promoted to assistant freight traffic manager at New York, succeeding **William J. Daily**, promoted. Mr.



(c) Underwood & Underwood
Charles A. Arentzen

Arentzen entered the service of the Lackawanna in 1906, as a clerk in the Boston office. He was transferred to the general eastern freight office at New York in 1909. In 1920 he was promoted to general eastern freight agent at New York and in May, 1934, he became assistant general freight agent.

Thomas E. McAndrews, assistant general freight agent of the Erie at Pittsburgh, Pa., has been promoted to foreign freight traffic manager, with headquarters at New York, succeeding **H. F. Bell**, resigned. Mr. McAndrews entered the service of the Erie as a stenographer in the chief dispatcher's office at



Thomas E. McAndrews

Dunmore, Pa., in 1908, and has been in continuous service ever since, with the exception of a period of 18 months during the World War. He was appointed division freight agent at Paterson, N. J., in 1920, and in 1928 he became city freight agent at New York. In 1931 Mr. McAndrews was appointed assistant general

freight agent at Chicago and in September of the same year, he was promoted to assistant general freight agent at Pittsburgh.

ENGINEERING AND SIGNALING

Jose I. Boneta has been appointed division engineer of the Southeast division of the National Railways of Mexico, with headquarters at Tierra Blanca, Ver. C., succeeding **A. Polanco**, deceased. **Antonio de Legarreta** has been appointed division engineer of the Central division, with headquarters at Aguascalientes, Aguas., succeeding **L. Reyna**.

MECHANICAL

Don Nott has been appointed acting master mechanic of the Beardstown division of the Chicago, Burlington & Quincy, with headquarters at Beardstown, Ill., to take the place of **W. E. Corya**, who is off duty because of ill health.

OBITUARY

George E. Patterson, formerly vice-president in charge of operations of the Illinois Central and now manager public relations, with headquarters at Chicago, died in that city on September 18.

Maurice Williams, freight traffic manager of the Delaware, Lackawanna & Western, with headquarters at New York, died on September 1 at his home in Lyndhurst, N. J. He was 62 years old. A photograph of Mr. Williams and a biographical sketch of his railway career was published in the *Railway Age* of April 27, in connection with the announcement of his appointment as freight traffic manager for the Lackawanna.

Fred E. Winburn, a special representative of the Freight Claim division of the Association of American Railroads, whose death on September 10 was noted in the *Railway Age* of September 14, was born at Gainesville, Ga., on May 28, 1874. He entered railway service on December 11, 1893, in the local freight department of the Nashville, Chattanooga & St. Louis at Atlanta, Ga., and on January 11, 1904, he entered the office of the freight claim agent of the Atlanta & West Point, being appointed freight claim agent of that company on May 28, 1908. Six years later Mr. Winburn was made general claim agent of the Atlanta & West Point, the Western Railway of Alabama, and the Georgia Railroad, and during federal control of the railroads he served as assistant general claim agent of the Atlanta, Birmingham & Atlantic, the Atlanta & West Point, the Western Railway of Alabama, the Georgia Railroad and the Charleston & Western Carolina. On return of the railroads to corporate control on March 1, 1920, he was appointed auditor of the Atlanta & West Point and the Western Railway of Alabama. On December 1, 1920, he was appointed special representative of

the Committee on Cause and Prevention, of the Freight Claim division of the American Railway Association (now the Association of American Railroads), which position he was holding at the time of his death. Mr. Winburn had also served as secretary of the Southeastern Claim Conference, and as president of the Freight Claim Association.

Frederick Passmore Gutelius, resident vice-president of the Delaware & Hudson, at Montreal, Que., died on September 12 at North Bay, Ont., after a long illness. Mr. Gutelius was born at Mifflinburg, Pa., on December 21, 1864, and was educated at Lafayette College (C. E., 1887; Sc. D. 1914). He entered railroad service in 1888 as assistant engineer for the Pennsylvania lines west of Pittsburgh, serving in this capacity and those of assistant on engineer corps and assistant supervisor, until 1892. From 1892 to 1894 Mr. Gutelius was engaged in hydraulic engineering and mining surveying at Butte, Mont., and from 1894 to 1895 he was county surveyor, Silver Bow County, Mont. From 1895 to 1898 he was in charge of construction, Trail Creek Tramway, British Columbia, and general super-



F. P. Gutelius

intendent of the Columbia & Western (now Canadian Pacific). He became division superintendent of the Canadian Pacific in 1898 and in 1902 he was appointed engineer maintenance of way for that road, becoming assistant chief engineer in 1906. Mr. Gutelius served as general division superintendent for the Canadian Pacific at Montreal, Que., from 1908 to 1912. From 1912 to 1913 he was a member of the Canadian Government Royal Commission to investigate construction of National Transcontinental railway and in 1913 he became general manager of the Canadian Government Railways (now Canadian National), which position he held until 1917, when he became vice-president in charge of operation and traffic for the Delaware & Hudson at Albany, N. Y. During the war period he acted as federal manager of the Delaware & Hudson and became resident vice-president at Montreal in 1923. Mr. Gutelius was a member of the American Society of Civil Engineers and the Engineering Institute of Canada.